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TO MY BROTHER

SRIJUKTA RAM CHANDRA CHAKRABERTY.

THIS BOOK IS AFFECTIONATELY DEDICATED.



PREFACE

These chapters are the outgrowth of the materials I gathered to write a cultural history of the Hindus. But at that time the excellent monograph of late Romesh Chandra Dutta, *The Civilisation in Ancient India*, was not known to me. Its perusal has convinced me that there are not yet sufficient new materials available to add another book on the subject. So I am giving these hastily-drawn sketches to the public, believing that some of them may prove to be useful and interesting to the students of ancient Indian history.

The Author.

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A

STUDY IN

HINDU SOCIAL POLITY.

I.

PHYSICAL GEOGRAPHY OF INDIA.

Physically India has not been always as she appears to-day. Changes there have been as changes are inevitable in the process of existence. Where the mighty towering Himalayan range stands, there rolled the waves of the Atlantic and over that vast region now known as Tibet, Assam and Burma, the Pacific and Atlantic oceans joined each other in mutual embrace. Not only the Gangetic and Indus Deltas were under the bottomless sea, but even over that immense area now known as Rajputana, the waters of the Atlantic surged their waves against the Aravallis. In that ancient Paleozoic age India was connected with Africa in the west and in the south with a continent extending over to South America. The coral islands, Laccadives, Maldives, Chagos, Mauritius and Madagascar bear testimony to the disappearancc of the Indo-African Continent. The Western Ghats were the mountain partings of the waterways. No river falls into

the Arabian Sea except the Narvada and the Tapti and they force their way into the sea by denudation. Andamans, Java, Borneo, Philiphines, Australia, New Zealand, Japan and the numerous islands are but the mountain tops of the submerged Pacific continent, connecting India with South America. It is also known as the volcanic belt, or the circle of fire. The Vindya range was the kernel of the Indian peninsula, though not so degraded and shrunken as to-day, due to weathering and erosion. And round it extended the Gandavana continent, linking India with Africa.

Then out of the stillness of the slow process of sedimentary formations of the Permian period, issued tremendous volcanic cataclysms that shaped the outlines of Indian topography, almost as we see it to-day except the growth of the Indus and the Gangetic deltas. Deccan was formed with vast and extensive lava deposits to the depth of thousands of feet and covering over two hundred thousand squire miles of land area alone. The lava flow might have been on a far grander scale and now lies buried under the Arabian Sea. The Gandavana continent became split up into two parts, India and Africa and became permanently separated from each other by the Arabian Sea and the Indian Ocean. And during the Mesozoic age the majestic Himalayan range became gradually lifted up to its eternal ice-capped height. The Rajputana Sea retreated and became slowly filled up with the silts of the Aravalli chains. And the Central Asiatic Plateau, Tibet, Assam and Burma were formed. Thus the principal orographical landscape was framed. The separation of Andamans from Aracans and the submergence of the great Pacific continent is of recent Geologic time, possibly Pliocene period, if not

later. The island Rameswaram was connected with the main land even four centuries ago.

The Indo-African continent is not a mere geological speculation. There are many incontestable proofs to support the contention. Bathy-orographical map shows clearly a submarine bank still connecting India with Africa, And the water of the Arabian Sea is always a few degrees higher in temperature, for the bank prevents the cold Antarctic current from passing through it. The similar marine Cretaceous fossil deposits in the Nervada valley, North Africa, Syria, and even Southern France clearly indicate a land connection. While in Southern India the fossil deposits are different and very similar to those found in East Africa, Australia and South America and even the flora and the fauna resemble remarkably, thus proving a land barrier between the Indian Ocean and the Arabian Sea, as well as the existence of the Pacific continent. And moreover not only paleontologically, but also in the present distribution of plants and animals, there is unmistakable demarkation of two continental origin and both converging in India. There are numbers of genera and species, typically australoid lacking mammalian genus, with the only exception of platcanthomys, and chiefly consisting of low forms of vertebrates as reptiles and batrachians, still confined in the Indu-Malyan region, while the western division abounds in well-developed mammalian types, which are not only found in Central and Northern Africa, but are met with also in Madagascar. Any divergence can be easily accounted for by the independent course of evolution since the two continents became separated from each other perhaps in the Eucene period. This is also the Hindu tradition of *Jambu Dwipa*.

But in the main Gandavana, there has been hardly any radical change excepting the weathering and denudation, since the early Paleozoic times. No marine fossils have been found, excepting in the Himalays when the marine limestone of Numilitic age, of comparatively recent formation has been raised to 20 000 feet above the sea level. The upheaval of this gigantic mountain system however, has fashioned the topography of the country, as it stands to-day.

The wealth and fertility of India are mainly confined in the Indus and Gangetic valleys. On the shores of the Ganges, from the days of hoary antiquity, have been established the principal centres of Indo-Aryan civilisation, opulent cities and marts of art, industry and culture. Two thirds of the agricultural production of India owe their origin to the fertilising, silt-bearing waters of the Indus and the Ganges, and in the vast and extensive basin that separates the main streams of these two mighty soil-renewing river systems, there cannot be found a boulder, not even a pebble to rob the soil of its richly uniform alluvial surface. And no river can be compared in its fertilising and wealth-producing result with the Ganges except perhaps the Nile. Virtually the Ganges feeds half the population of India. No wonder the Hindus venerate the Ganges as a sanctifying river, and from its rise in the Himalayas to its mouth in the Bay of Bengal, every inch of ground and each drop of water is sacred. The alluvial deposit is so rich and deep, for it needs only the earth to be scratched and seeds to be deposited for things to grow, and in recent borings it has been observed in Calcutta that at the depth of 481 feet, no rock bottom or marine bed was found; and at Lucknow even below

1336 feet, that is, 1000 feet below the sea-level, only coarse sand was seen at the end of the hole. In the Bay of Bengal there is a deep hollow known as *scratch of no ground* where water is more than 300 fathoms deep, while this great depression of the Gangetic and Indus basins are due to the stupendous upheaval of the Himalayan mountain system, and for a long time a deep and past chasm existed between the Himalayas and the peninsula and it has been filled up by the silt deposits brought by the Indus and the Ganges, and the partition of these two river systems in different direction is of but recent geologic event. The depression of the lower gangetic basin is entirely due to a different cause and owes its origin to the lifting of the Rajmahal and Assam Hills.

The Ganges springs forth from a snow-fed glacier at the elevation of about 10,400 feet at Gongotri. During its course to Hardwar, which is about 200 miles, this rapid *Jahnavi* and splashing mountain stream is called *Bhagirathi* and joining with *Allakananda* makes a heavy descent, for Hardwar is only a few feet above the sea-level. For the rest of nearly 1340 miles, the Ganges is a broad turbid river, flowing in easy gradient, and the fall is not more than 8 feet for a hundred miles, carrying its precious burden, distributing its fertilising replenishing silt and in the Delta, being no more able to carry it further lacking sufficient gradient, deposits it in the lower Bengal and has created and is creating land out of the ocean beds. The average fall from Allahabad to Benares is 6 inches per mile ; from Benares to Calcutta between 4 and 5 inches ; from Calcutta to the sea 1 to 2 inches. Eastern Bengal, the most fertile and luxurious soil in

India is but its recent product, in conjunction with the Brahmaputra, which arising in the Northern Himalayas passes more than half its course, and then making a sudden magnificent curve enters into Assam and Eastern Bengal. Where these two great rivers unite near Goalund and in its course to the sea, known as the *Megna*, the process of land-formation can yet be seen with graphic interest. In the rainy season when the molten snow swells these rivers by the summer heat and the rain adds to their volume, the whole Eastern Bengal is a vast expanse of water, only the human habitations here and there lift up their heads barely above the water level, just like tiny islands, surrounded by waving, slender and graceful palms, cocoanuts, mango trees and bannanas and all communications and intercourse are made through the water-channel. During winter the land is intersected by numerous rivers, rivulets, islands, marshes, shoals and sand banks. And in some rainy seasons when the heavily moist-laden current striking against the Arkanas and Assam Hills causes a great precipitation and in this cyclonic period if it happens that the storm wave coincides with the rising tide then the whole low coast land may be inundated with 10, 20, nay even thirty feet of tidal water, which is not unusual, as it occured in 1876 when more than 100,000 people were drowned in the district of Backergunge alone.

Only there is another part of India which resembles Eastern Bengal in its water communication and aquatic charm and super-abundance of food supply, that is the Jhellum (*Chandra-Bhaga*) basin in the Cashmere valley. This was a lake, fringed by mountain chains and as soon as the Jhellum broke one of them near Baramula by

swirling down through rifts and clefts and entered into the plains, which drained the mountain-hollow, thus exposing the alluvial lake deposits, lands began to form. Near Srinagar the land-formation can still be seen.

The Indus more or less retains its mountain characteristic. Arising in the *Kailash* Himalayan glaciers, (14500) it crosses the entire Cashmere, almost dividing it into half and even when it enters the plains, leaving the mountain gorges at Attock, it is still for a long distance not far from the hilly back-ground. The silt of the Indus has been an important factor in filling up the ancient Rajputana sea. In the Runn of Cutch, the land formation can still be seen. The Indus is about 1800 miles in length and the gradient of the river bed is not so easy like the Ganges. But in the delta the fall hardly exceeds 3 inches per mile and due to the deposit of the silt, the level of the river bed is being constantly elevated and in many localities, it is above the land surface. Even within the historic time the Indus has changed the course of her channel when the main stream bursts its way through the lime stone ridges at Sukkur. This displacement has marked the disapperance of many populous centres which were dependent on its water supply. There is nothing astonishing in it. The Indus carries sufficient detritus and raises the level of its head, and it is 70 feet above the plains of Sind frontier, some 50 miles to the west of it, thus exposing the surrounding districts to dangerous floods whenever the waters can break through the banks, as with the Damoder in Northern Bengal, and where near the mouth, the change of channels and shifting of sandy shoals are frequent as in the Megna.

Other rivers have forced their way across the peninsula from the Western Ghats, Vindhya ranges or the Nilgiri Hills, into the ocean simply following the path of least resistance, of which the Mahanadi, the Godavari and the Krishna are the most important and they are comparatively speaking all ancient rivers, belonging to the old Gondavan continental system.

The geological age of the different rock systems of the Indian peninsula can be thus expressed in the equivalence of the European terminology.

Unfossiliferous Archean and Algonkian group :—It extends over more than half of the peninsula and is the foundation bed of the old Gondovan continent, no which other sedimentary deposits have been laid down. The oldest of them are perhaps the Schistose gneisses, which are often found impregnated with pegmatites in the mica-mining districts ; eruptive gneisses and granites as charnockites and norites of Southern India and anorthosites of Bengal. Next in order come the Gwaliors, Bijawars Penganga, Cuddapaths, Vindhas Kurnools, Kaladgis Pakhabs and Bhimas. They are generally foliated and folded and are crystalline plutonic rocks.

Cambrian marine formations :—Salt range. In the Salt range are found the Trilobite which have a very close resemblance to Olenellus and they are but slight variations of the same species seen in the Lower Cambrian of the European formation, indicating the sea connection of India with Europe and that Mediterranean is but a shrunken relic of the past.

Silurian :—In Central Himalayas and Upper Burma.

Devonian :—Chitral and Maymyo limestones.

Carboniferous :—Fenestella shales of Central

Himalayas; Zewan beds of Cashmere; limestones in Burma.

Permian :—Boulder bed of Salt Range.

Triassic marine formations :—Productus shales and limestones of Central Himalayas and Salt Range; Triyas of Central Himalayas and Ceratite formations of Salt Range; Katrol, Chari and Patcham series of Cutch; Spiti shales and massive limestone of Beluchistan. Fresh water formations, corresponding to the same geologic age; Talcher boulder bed, Damodaer, Panchet, Rajmahal and Jubbolpur series.

Cretaceous :—Bagh, Arialpur, Trichinopoli, Utatpur and Cardita Baumonti beds. Fresh water formations are Deccan trap and Lameta series.

Tertiary marine formations :—Kirthar, Ranikot, Sabathu, Nari, Gaj, Yenangyaung, Prome and Makran series. Fresh water: Kasauli, Lower Manchar, Upper Siwaliks and Irrawadi series.

Recent :—Cuddalore sandstones and Coral banks. Fresh water: Older alluvium of Norbada and Godavari; Porbondar stone, Rajputana desert and recent alluvium.

It does not follow that the Indian rocks are simple and homogeneous in their formation and structure. For the lava-flows, fresh sedimentary deposits, successive elevations, depressions, denudation, foliation and inclusion of lava-flows have changed the surface for the major part even of the Archean rocks of igneous origin. It is easily illustrated by the presence of shales, sandstones, limestones and basic lava which are found mixed up in the conglomerates of the mica-bearing pegmatites which are found in the Nellore and Hazaribag districts. In the Dharwar rocks quartzites are predominant, consisting of

micaceous rich and valuable iron-ores mixed occasionally with crystals of magnetite or hematite. The chloritic and talcose schists are found mixed with in places with finer grades of steatite, which unquestionably owes its origin to the volcanic action and water. The Cuddapath sediments which are nearly 20,000 feet in thickness in Southern India, deposited on the denuded and highly folded surface of the Archean system cover a large area of the peninsula, and as they are all unfossiliferous, it is very hard to ascertain their exact age and relative position. Even in the Vindyan system, which chiefly consists of shales and limestones, which are well suited to preserve the structure of organic life, no distinct fossil impression has yet been found. In the Salt range which has not only preserved best the fossils even of the Cambrian age, as is evident in the Neubolus series which is nearly 150 feet thick, but also the ripple marks of the ocean which surged on its shore and the retreating and the evaporation of whose waters caused the salt deposits, we find the curious phenomenon of the appearance of rock salt, gypsum and shales of the formation of the tertiary period lying below the salt marl of the Cambrian age in the Kŏhat area. This may be easily explained on the theory of plutonic disturbance and the folding and the contortion of the respective beds; but it gives a clear indication of the fundamental complex of the Indian geology.

Ceylon is the integral part of India and it was but recently separated from the peninsula and is still linked together by Rameswaram and Mannar islands and the submarine banks and rocks that connect them, known as *Rama's bridge*, where water is hardly a few feet deep

and navigation is not possible except at two points and for only small and shallow vessels. The mountain-chain of the Western Ghat which is depressed at Pali Ghat, after its highest ascent in the Nilgiri Hills, just as a fold, allowing the passage of the only river Ponnani, on this side, rises up again as an undulatory wave and crosses through Travancore as Cardamon Hills and is submerged in the process of separation of Ceylon from India and makes its highest ascent again in the Central part of the Island as Pidurutalaga (8, 300 feet) overlooking the sacred peak, where lies the legendary foot-print of Goutama, the Buddha. Mahintala and Siguri chains have a special affinity in their formation and constitution with the Deccan Hills. The northern part seems to be a recent formation out of the detritus washed from the Coromandel coast, and covered with magnificent primeval forest.

Ceylon is a seductive island, full of beautiful mountains, forests, cataracts, water-falls, glens and valleys, unrivalled anywhere for its serene scenic charms, as well as fertility of the soil. It is nature's true play-ground. And it has wonderful harbors. Trincomali is world-famous for its harboring facilities and the imposing grandeur and beauty of the outlook.

The Himalayan system is the backbone of the Central Asiatic continent. It is the chief reservoir of water supply for India and China. Next to the Polar regin, there is nowhere to be found such an extensive ice and snow fields as in the South-eastern Trans-himalays, which exceeds fifty to seventy feet in depth. The Tibetian table-land, the "roof of the world", a vast territory extending over thousands of squire miles and generally above 10,000 feet of altitude, is on its north eastern flank ;

on the north western are the Hindukush and Sulaiman ranges thus girdling India from the external world, except through narrow passes, as Skipi and Almora groups, Gomal, Tochi, Kurram and the Khyber passes, especially the latter, through which the successive waves of conquering hordes have reached the fertile Indian plains. The Himalaya protects India not only in various ways, but also replenishes the soil of the peninsula that lies at her feet, almost as if in a reverential attitude for the numerous blessings that she bestows on her. But for the Himalaya the climate of India would have been much colder as the lofty mountain chain prevents the arctic cold wave to enter into the plains; for the cold current can not make an ascent of more than 15,000 feet, which would be necessary to trespass the mighty mountain barrier. Nor are the moisture-laden precious clouds allowed to traverse her region without depositing the valuable burdens and squander the treasures in foreign lands. All the three principal river systems with their tributaries, Indus, Ganges and Bhramaputra originate in the trans-himalayan glaciers.

The Himalaya also enjoys not only the varied charms of her magnificent mountain scenery, but also the different climates, flora and fauna of arctic and alpine to temperate Zones, according to her altitude. Her valleys are well noted for fertility, wealth and beauty, especially Cashmere Kulu, Nepal and Sikhim.

Kashmere is dominated by gigantic mountain systems. Hindukush and Karakoram Ranges and some of the most imposing and loftiest glittering peaks of the world, Nanga Parbat (26,629), Rakaposhi (25,5610), Dapsang (282730), and the graceful Golden Throne (23,600); yet they are

but the wrinkles of the high Tibetian hinter-land, and the deeply eroded Indus that in a magnificent curve, almost intersects the territory, draining the snow-fed glacial floods of the North-western Himalayas, as does the Bhramaputra in the North-eastern section, making a deep trough, in the shape of a rainbow, is hardly more than a scratch on the surface. Kashmere enjoys the climate of Europe, according to the elevation of the ground. Jhellum valley is world-famous for the unique combination of water and mountains and the extraordinary fertility of the alluvial soil, especially in the Srinagar district.

Nepal is another very beautiful valley, elongated in shape, situated between the trans and sub-Himalayas. Unfortunately it is not so well known as the Cashmere valley, for it is not only separated from the plains by the mountain chains, but also by no less formidable Terai, formed by the accumulation of water in the depressed area at the bottom of the hills, giving a luxuriant growth to an wild, intractable, dense marshy forest and an extremely unsalubrious malarial zone. However once in the valley, the climate is very invigorating and delightful and the scenic beauty is varied and absorbing in interest. There are the most gorgeous and graceful peaks in the world that invite attention and admiration, as Nanda Devi (25,661), Gurla Peak (25,200), Daulagiri (Dhabalagiri 26,826), Gosai Than 26,305), Gourishankar (29,002) and Kanchanjinga (28,156).

Oudh has an agreeable climate ; it is neither too hot and dry in summer, nor too cold in winter ; it is pleasant all the year round. The soil is alluvial and fruitful and bears the flora of the temperate climate. Valmiki says of the land in his celebrated Ramayana : "There is

a smiling country, abundant in riches of all kinds, in grain and in cattle, situated on the bank of the Saraju and is named *Kosala.* There was a city celebrated throughout universe, founded by Manu, the chief of mankind. This was named *Ajodhya.*"

Punjab was not *Panchanada* long ago, as described in the Vedic songs. It was really *Saptasindhava*, a fecund land, watered by seven exquisite rivers, the Indus, Sutlej, Jhellum, Chenub, Ravi, Beas and the Saraswati and the last one has at present disappeared in the sandy wastes. The tradition relates that Saraswati having discontinued to join the Indus, made an underground connection with the Ganges and the Jamuna near Prayag. Over an extensive area now in semi-arid condition, there are traces of ancient river beds and in the deltaic depression can still be seen the old channels, which once brought the life-giving waters, bringing productivity and wealth to the teeming population that lived on the soil, but which is now a more barren sandy desert where a few wild asses can only graze. The variation of temperature in the Punjab is also extreme, perhaps to the denudation of the trees, exceeding more than fifty degrees. In the summer, the wind seems to escape from the mouth of the fiery furnace, and in the winter water freezes. However the soil is productive, where water is procurable through the development of irrigation.

Deccan is virtually a ragged and rugged lava plateau covered with sheets of lava roughly 150,000 squire miles to the depth of nearly 6,500 feet and would have been entirely barren but for the copious rain and the tropical sunshine which have partly decomposed the superstratum and out of the detritus, a fine marl has been deposited in

the valley which is highly productive and grows an exuberant vegetation. There are only two rivers, the Tapti and the Narmuda which have forced their way across the Ghats, and both rise in the Central massive of the *Vindyachal*. At the source of the Narmada at Amarakantak (3,493) three streamlets originate, going in three dlrections, the Seonath, a tributary of the Mahanadi, and the son of the Ganges. And of these the Narmada is the most beautiful, a gurgling stream, breaking here and there into the most magnificent cascades and then running for a while like a serene, rippling and dreamful lake, girdled by mountains and when rushing through the Jubblepur gorge, it becomes again a broad sheet of water reflecting the surrounding marbles, and having a very charming vista especially at the moon-lit night.

Southern India has a very delightful landscape. The soft enchanting beauty of the Nilgiris is well known. But the coast line of Travancore is also a magic panorama. Where the sea has ingressed into the hills and has formed sheltered estuaries, fords, armlets, natural harbors and lagoons and the sparkling mountain cascades fall directly into the sea and their splashing waters in the glorious sunshine create rainbows of myriad hues, and while from the fringe of the hills the graceful palms wave their greetings, near the waterline under the shelter of the branching trees, the gorgeous butterflies saunter about in warm scent-laden air and from the flowery bowers birds pour forth their melodious songs of visionary paradise.

Kalingapatan is the only harbor on the Eastern Ghats. And the Krishna is more than a geographical boundary of the Dravida, for the river has never been crossed by any external aggressor.

The Mahanadi and the Baitarini bring the volcanic lava crystals from the Deccan and depositing them at the mouth in the sea, have built the Chilka lake with the alluvial sediments. Inundations are very frequent at the mouth of these rivers, as well as of the Godabari and the Krishna which are magnificent rivers, for the level of the soil is low and when the tidal wave coincides with the swollen river of the rainy season, it is unusually destructive.

CentralIndia is the kernel of the ancient Gondowana. Its denuded surface, though shorn much of its primitive grandeur and beauty, has still its charm and attraction. The climate is bracing, but the soil is poor, hilly and woody.

Eastern Bengal is the luxuriant, steamy, hot-house garden of India, watered by numerous sumptuous rivers, and the soil is perpetually renewed by the deposits of their heavily laden silt-bearing turbid water. There is as much water as land and she seems to belong more to the sea than to the peninsula and it is annually contested by water for supremacy.

There are six marked and regular seasons in India, but three are more pronounced—rainy season from May to October, winter from November to February, summer from March to June. In the Monsoon, the thirsty, parched and scorched soil drinks the long-expected and beneficent rain with ardour. In a few days the feverish earth is quite transformed and puts on a fresh smiling countenance. In the Deccan one sees the effect of the rain apparently. Due to the high mountain barries, rain is not equally distributed. Where rain falls, there grows a superabundant, indomitable vegetation. A few miles off where it is scanty, it is almost a dreary, burning waste.

However the Monsoon comes with a regularity and it

takes about three weeks to traverse the peninsula. Due to the presence of the colossal, towering, massive Himalayan range, the atmospheric equilibrium is disturbed in the Southern Asiatic hemisphere. Its temperature is considerably higher during the summer (about 10-15 degrees) and during the winter, decidedly cooler than in the regions in same latitude either in the Atlantic or in the Pacific. In the summer the upper layer of the air is overheated and it rises up. So, the vapour-laden heavy sea-air advances to fill the vacuum and to establish the equilibrium. When the first sea-current from Bay of Bengal strikes at the Arakan Hills, it becomes deflected in its motion and at Cherrapunji, there is a virtual downpour of about 500 inches a year and which falls in torrents. That there is more rain in the hills than on the sea-coast, is due to the fact that some ascension of the atmospheric moisture is neccssary to an upper cooler layer for its condensation into water. This condensation also accelerates the ascensional movement by liberating the potential energy and thereby helping to cross the mountain obstructions. Between showers there is often an interval, for the clouds need further ascension for precipitation and after repeated showers there is clearness of the sky and the sunshine, for the acqueous vapour becomes exhausted in the atmosphere. One monsoon current enters into the interior of India through the Gangetic depression and another from the Arabic sea direct through the Western Ghats. By the deflection of these currents due to the geographic and orographical formation of the peninsula, there is unequal distribution of rain. Thus on average, the Burmese coastal hilly districts receive annually nearly 152·94 inches of rain, while in the interior of Burma from 64·98 to 32·65 inches ; Western Ghats 120 ; Brahmaputra Valley 92·36 ; Gangetic Delta 79·38 ; Eastern Sub-Himlayas 64·46 ; Eastern Ghats 52 ; Satpuras (east) 55·67 ; Satpuras (west) 34·32 ; Gangetic plain (east) 47·46 ; Gangetic plain (west) 30·89 ; Western

Sub-Himlayas 42·48; Central Indian Plateau 32·25; Deccan 29·68; Gujrat 27·64; North-western Indo-Gangetic region 10·24; Rajputna and Beluchistan 8·66.

The average mean temperature in the summer and the winter of the months of June and December in the following cities is as follows:—Agra in June 94·4 F. in December 62·5; Jaipur 91·8 : 63·4; Lahore 93·4 : 56·8; Peshawar 91·2: 52·4; Madras 89·6 : 76·5; Bangalore 75·8 : 68·4; Bombay 83·6 : 77·2; Nagpur 88·4 : 67·8; Patna 88·2 : 62·9; Karachi 88·1 : 68·1; Trichinopoli 88·7 : 77·3; Calcutta 84·8 : 66·3; Chittagong 81·6 : 68·1; Sibsagar 82·8 : 67·4; Mandalaya 86·8 : 70·8; Rangoon 81·5 : 77·3; Srinagor 71·0 : 38·2; Darjeeling 60·7 : 42·7; Simla 67·7 : 44·3; Mount Abu 75·7 : 60·8; Leh 58·9 : 24·0.

From this it is evident, that an infinite variety, a small universe itself, a microcosm of all climates, is India. When the sun like the fiery furnace burns the plains of the Punjab, eternal spring enchants the dwellers of the Nilgiris, there is wintry climate in the upper Himalayas and desolate and polar ice-fields in high mountains. When it is the rainy season in Eastern Bengal and it pours like a deluge, it is azure blue sky in Rajputna. On one side the desert of Thar and on the other the indomitable luxuriant vegetation of the Gangetic and Brahmaputra basins. On one side the naked and barren mountain regions of Rajputana and Beluchistan, and on the other the valleys rich and fertile as Cashmere and Nepal and the glittering snow-capped peaks like Gourishankar and Davalagiri. It is a thousand countries united in one, and the climate and the landscape separated by thousands miles are found here within the reach of a day's railroad journey. Flora in the Himalayas resembles that of Europe varying from Italy to Scandinavia according to the altitude; Northern India like Persia and China; Southern India like central Africa, Eastern Bengal and Sunderbans like Malaysia.

II.

ETHNIC ELEMENTS IN HINDI NATIONALITY.

Zoologically man belongs to the placental eutherian mammalian order,* and among the mammals, he belongs to the family of primates. The primates comprise *five groups* :—the Marmosets (Hapalidae), the Cebedae, the Cercopithecide, the Hominidae and the anthropoid apes (Simidae). Of these the first two can be easily dismissed from our consideration as they are confined to America and they are differentiated by the rest of the group by many striking characters. The other three osteologically, morphologically and philogenitically in their embryonic growth have fundamental organic affinity and resemblance with man. A five months old foetus of the gorilla can hardly be distinguished from that of man of the same age. The toes of a human baby have a great clinging power, a reminiscence of the simian ancestry and arboral life. And a young negro by the globular formation of his skull, prominent cheek-bones, platyrhinian (flat-nosed) face and prognathous jaws very closely resembles a gorilla or a chimpanzee. The lowest coccygeal vertebrae yet remain as a rudimentary tail. The only difference between man and

* For the young is nourished in the womb of the mother through the placenta and are born fully formed without needing the protection of a pouch, as is the case with the marsupial implacentals or *Metatherians* or completing their development in a hatched egg as is the case with the monotremata or *Prototherians*.

the anthropoids is the erect position and the voluminous mass of the brain, both of which can be easily explained as adaptive functional uses. Running, leaping and climbing acted as elastic shocks to the marked curvature of the vertebral column and thus favoured the standing position, which was needed as a support to hold the increasingly heavy weight of the skull and its cerebral contents. And the difference of the weight of the brain of man from that of a chimpanzee or a gorilla is much less than between that of a gorilla and a lemur, or between a Caucasian and an Australoid.

However this does not mean that man has descended from a gibbon, orang, chimpanzee or gorilla. Rather it is more probable that all of them have sprung from a near common ancestor now extinct and thus the connecting link has been lost. Moreover due to the Geologic transformations of the Earth, deep ocean waves might now roll over what was previously the land surface and where man originated.

Whether different races of man are of polygenetic or monogenetic origin, can not of course be positively ascertained. But their characteristic variations and differenciations are by no means greater than what are to be found among the animals and plants, belonging to the same genera and species. And all the marked traits that differentiate one race from the other can be easily accounted for by environmental influences. The intellectual vigour and acuteness, the moral sensibility and fineness should not be any racial criterion. For they are either due to the arrested development of the one through unfavourable and depressed circumstances or the excessive growth in the other in the opportune conditions of life. The real

marks of distinction as classified by anthropologists are principally, colour, hair, nose and the cranium.

Colour :—Colour is due to the deposit and accumulation of the pigment granules in the lower layers of the rete Malphigi, as a protective cushion against the harmful penetrating actinic rays of the sun. Anatomically it is not even 'skin-deep'. For when by an accident as a scald or a blister, the epidermis is removed in a negro and most of the pigment cells come away with it, the dermis has the appearance of a white man. How the pigment is formed and why the deposition of the coloring-matter in one individual is greater than the other, belonging to the same race, nay the same parents, living under the same climate conditions, are not yet thoroughly understood. Perhaps it is the combined and complex effect of heredity and metabolism Never the two children, even the twins, inherit the same germ-plasms. The ancestral chain is so long, linking man to the unicellular protoplasmic speck and the ancestral inheritance is so rich and variegated that any characteristic might dominate due to atavism. And when the lungs and the liver are well developed and in high functional activity, the venous blood is thoroughly arterialized in passing through the pulmonic circulation, that is, the carbon it contains passes off as carbonic oxide into the air. Where the pulmonary function is sluggish, the liver acts the part of a compensatory organ ; the secretion of the bile is increased but the carbon is not so well abstracted from the blood and passing into fine capillaries, lining the papillæ of the skin, is deposited on their surface as pigment granules.

Hair :—Hair is the only horny product of the skin of man, yet left. It is the nature's protective garment

against cold and bruises. But by the constant use and friction of clothes, he has been well-nigh denuded of his ancestral hairy coating and he has it still in sufficient quantity on the head, arm-pits and the pubic regions. Beards in the male have been only developed as sexual charms. But on the head the European peoples are showing a tendency to lose it by their excessive use of felt-hats. The human hair is chiefly of two kinds, wooly and smooth, with their various gradations. The difference in their morphological structure is that the smooth hair is circular in microscopical examination, while the wooly hair is elliptical. The dermis of the Negroes becomes excessibly thickened and hardened due to the superabundant accumulation of pigments and the hair encounters such a resistance in its development that it can only shoot up like a sharp-edged sabre and piercing the surface it becomes twisted from the beginning into a spiral form as it emerges from the incurvated mould.

Nose :—The function of the nose is to smell and to breathe. The long-nosed skull is called *leptohinian*, flat-nosed *platyrhinian* and the intermediate *mesorhinian*. As breathing is essential to the oxidising process of life, in a warm, humid climate, naturally the nose has evolved out to the short and flat, for the air lacking sufficient ozone, plenty of it has to be taken in and it being warm and moist, it can not do any harm to the nasal mucous membrane ; while in a desert or cold climate, the nose has necessarily to be narrow and long, for in a desert the dust particles are to be prevented from penetrating into the lungs and the dry air has to be gradually moistened and in a cold climate the air has

to be slowly warmed to the body temperature or it might easily cause congestive inflammation.

Cranium :—Cranium (skull) as a racial criterion has been the object of much study and speculation. But it is still elusive and obscure and the result is uncertain. Generally the skulls are classified as Dolichocephalic and Brachycephalic, according to the cephalic index which is generally stanardised by the ratio of the breadth of the cranium to its length, by hundredth measured usually from the glabella to the most prominent part of the occiput. All indices of 80· or above indicate *brachyeephaly* and all of less than 80· *dolichocephaly*. Thus Germans, English, Celts, Romans, Greeks, Hindus, Persians, Arabs, Jews, Africans, Australians, Chinese, Tunguses, Eskimos, and some American tribes are dolichocephalic. And the Finns, Lapps, Hungarians, Turks, Slavs, Buskes, Etrurians, Samoieds, Circassians, Afghans, Tartars, Malayas, Mongolians, Polynesians, Papuas and some American tribes are brachycephalic. The absurdity of such a standard of racial measurement is manifest when one remembers that in a collection of 237 German skulls, the average transverse diameter was found 69 : 100, while 66 skulls from Africa presented the same average ratio, 69 : 100.

Then the question arises when and where man at first originated ? It is very difficult to answer the question with any definiteness. The anthropoid apes seem to have existed for at least 3 millions of years, as testified by the fossil remains. Man's antiquity is not so certain. In the explorations of Nippur, the Sumerian civilisation has been estimated by Dr. Hilprecht to be more than nine thousand years old. Mr. Finders Petrie found at Gerzeh near Meydum "a prehistoric cemetry with the earliest known,

of about 6000-7000 B. C., apparently a chance lot of native iron worked up."* Again in "the numerous borings made in the alluvium of the Nile valley to a depth of 60 ft., where down to the lowest level fragments of burnt brick and pottery were always found, showing that people advanced enough in the arts to bake brick and pottery have inhabited the valley during the long period required for the Nile inundations to deposit 60 ft. of mud at a rate probably not averaging more than a few inches a century."† Man's bones have been found mixed up with the fossil remains of mastadon and rhinoceros which are long extinct in the same geological strata. Ever since the discovery of the fossil human bones at Forbes Quarry, Gibraltar, at Neanderthal in Germany, Spy in Belguim, Somerset ancient river beds in England, keen public interest has been awakened. In the case of the *Home heidelberggenesis* all the molars except the third left have 5 cusps. The tendency in recent man is toward a 4-cusp type for the third molar, if indeed there be a third molar. The breaking away of the crowns of 4 teeth on the left side have tended to facilitate the study of the pulp cavities and the walls. This study reveals the fact that dention of *Home heidelberggensis* represents a youthful stage in the modern European. That is to say in the ontogeny of the latter, a stage representing adult dental characters when the race was young is now reached at the age of 9-14 years. The Galley Hill skeleton came from a depth of more than 8 ft. in Pleistocene high-level river drift and Mr. Keith estimates that it is not less than 170,000 years old, allowing "1000 years for every foot.

* Records of the Past, Vol. 10. p. 315.

† E. B. Vol. III. p. 115.

which the river has worn away or laid down". The fossil found in 1911 in the ancient bed of the river Axe in Somerset, must be older, as it lacked the power of articulate speech and was perhaps contemporaneous of the time when the British Isles were still connected with the continent. In the Wildkirchli cavern (Canton Appenzel, Switzerland) Mousterian fossil has been found with two bone implements and bones of the cave lion, the cave panther, badger, marten (Mustela martes), ibex, chamois, stag, marmot, otter and hermit crow. As this cave must have been occupied before the Wurm glacial period, the mousterian epoch is atleast 100,000 years old. But as the Chellion industry is older and was of long duration and their remains are not only found in the lower Quarternary but also in the Miocene and even in the Oligocene as at Boncelles, Europe must have been certainly inhabited from much earlier times. The *Pithecanthropus Erectus* the name given to the species, supposed to be represented in portions of a skeleton, discovered by Dr. Dubois 1894 in central Java, is certainly much older. The specimens consisted of two teeth, found at different times a few yards from each other, the top part of a skull found about a yard from one of the teeth and a femur about 15 yards distant and they were all lying in a volcanic tufa on the bank of the Bengawan, near Trinil. The cranium has only the capacity of 850 cc. but the femur is long and straight and is entirely human though the tooth resembles that of a gorilla. Dr. Dubois and quite a few naturalists regarded this as the connecting link between man and anthropoid apes and they claimed that these bones had been found in the Tertiary bed. But these assertions have been questioned. Earnest Hæckel thinks that man

originated in Lumaria and migrated from that place to the rest of the world.

The question then arises, why and what made this people migrate ? This is no solitary exception. All races have migrated, as all animals and plants. We do not find anything in the tradition of a single race, that does not indicate that the new-comer did not come from a distant land and found the country already occupied and the natives not conqered and subjugated. There have been successive waves of invasion and every race and nationality has been slowly built up on this diversified strata with the coming and fusion of different bloods. And the motive is not far to seek. The primitive man had no fixed abode. He lived on tree-tops or in caves. The domestication of animal has not yet begun ; of course, agriculture out of question. Living as he did, on berries, roots, fruits and worms and as he advanced in intelligence, out of hunting small animals with the branches of trees and stones, the food-supply in a certain territory becomes quickly exhausted and in quest of food, he has to push forward. He may be driven by others who are in the same pursuit or the whole tribes may have to migrate to great distances before advancing and retiring glaciers and in the post-glacial periods, the consequent frequent floods. The accumulation of thousands of feet of ice and snow was not alone confined to the northern hemisphere. The testimony of ice-action is even scattered over southern India and Australia. Mr. T. H. Holland of the Indian Geological survey writes :—"At different parts of this great southern continent (India) there occur peculiar boulder-beds whose special characters appear to be best explained as the result of ice-action. The boulders of this peculiar formation

of Talcher series vary from mere pebbles to blocks weighing many tons, generally well rounded and rarely scratched, lying often in a matrix of fine silt, a matrix which could not exist if the boulders had reached their present position by rolling in rapid streams. The formation in New South Wales which is taken to be the equivalent of the Talcher boulder-bed has a similar structure, with large and sometimes striated boulders embedded in a fine silty matrix ; and in this case the tranquil conditions under which the formation was laid down are shown by the inclusion of numerous delicate *Fanestellæ* and undisturbed bivalves lying in the silt."*

What caused this great ice-age or glacial period or periods when ice and snow accumulated to a depth of more than a mile over nearly half the surface of the earth at one time or the other? Various theories have been formulated, but they do not explain all the phenomena and they are more or less unsatisfactory. The principals of them are :—(1) Elevation of the Arctic region, thus extending the ice-sheets to North-west Europe and North-east America. (2) Atmospheric changes, resulting in the reduction of the Carbon Dioxide, a thermal absorbent, and by the appearance of new lands, oceanic currents were interrupted and consequently the moisture in the air was depleted, and as both moisture and Carbon Dioxide act as a thermal blanketing for the earth, the extending of the polar ice-fields was the natural resultant of their impoverishment. (3) The shifting of the axis of the earth. The famous astronomer Arrhenius writes :—"The poles of the axis of the Earth appear to move in a very irregular

* Imperial Gazetteer of India, Vol. I, p. 81.

curve about their mean axis. The movement is exceedingly small. The deviation of the North Pole from its mean position does not amount to more than 10 m (about 31 ft). It has been believed that these motions of the North Pole are subject to sudden fluctuations after unusually violent earth-quakes, especially when such concussions follow at rapid intervals."* (4) Croll's theory of the eccentricity of the orbit of the earth. According to him the glacial epoch or the world winter is coincident with the time when the earth is in aphelion at the winter solstice and the orbit has attained its greatest transverse elongation which the earth has done during the last million years at the following periods :—950,000 B. C., ; the next with 850,000 B. C., ; the third with 750,000 B. C., ; the fourth reaches forward a little from the century mark thus far maintained to about 600,000 B. C., ; the next epoch is about 500,000 B. C. The fifth lies between 350,000 to 300,000 B. C. The sixth corresponds with the year 210,000 B. C. The seventh falls approximately to 100,000 B. C. After the earth's orbit has reached its greatest transverse elongation, the epoch of moderation begins to ensue. The major axis of the orbit begins to contract and the minor to expand and the aphelion to depart from the winter solstice and as a consequence the sun with each cycle occupies a more favourable and favouring position with respect to the ice-cap which covers the northern hemisphere. Gradually and with long lapses of time, the lower parts, that is the southern parts, or the spurs of the ice-mountain begin to melt away and with the increasing sun's heat, the

* Svante Arrhenius—Worlds in the making, p. 28.

ever-swelling glacial rivers are formed, changing landscape, depositing glacial silts and debries, and making valleys, lakes and river-beds.

The first immigrants came to India from Lemuria or by whatever name it may be called—the land that connected eastern and southern India with Africa on one side and with Australia on the other. They are known as the Kols, Bhils, Pariahs and Veddas, all belonging to the Kolarian family, having close racial affinity with the Australoid race that spread over Australonsia, Malacca, Siam, Further India and spoke the Mon-Khmer languages. In the Puranas they were called *Nishadas* and 'described of the complexion of the charcoal, with flattened feature and dwarfish stature.'* Of course it goes without saying that there were various tribes of them and perhaps they came in successive waves of invasion. This we find in the composition of the Siamese race which has been formed out of the gradual fusion of the Lao-Tai group with the tribes of the Mon-khmer family and the consequent evolution of *Sukhothai* (sukho = happiness + thai = free) a corruption of Sukhodaya 'the dawn of happiness.' The compononent elements of *Sukhothai*, a term introduced into the country by the Tamil colonisers or Siamese race, are the following :—

Negrito :—Semang.

Mon-Annam :—Khmer ; Mon ; Yuan (Annamese) ; Lawa ; Kache ; Chong ; Malays.

Tibeto Burman :—Meao, Meo or Mean-tsu ; Muh-so or Lahu ; Kawi ; Aka or Kaw ; Lishaw ; Yao or Yao-yin.

The Lao-Tai :—Lao ; Ngiou (Shan) ; Lu ; Sam-sam.

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* Vishnu Purana, Vol. I. p. 13.

Other Tribes :—Karien or Karen ; Sakai. And fusion of a little Dravidian blood in the upper classes from the Tamil colonisers.

Then came the Dravidians and wrested the possession of the land from the Kolarians. Perhaps they intermarried with the chieftains and drove the rest of the aborigines to the mountain fastness, woody tracts and unfertile regions. It goes without saying that many were taken as slaves and the blood mingled more or less, consciously or unconsciously as it always happens under similar circumstances. As soon as the Kolarians were reconciled to their new destiny or were unable to offer any effective resistance to their new masters, the Dravidians became settled in the peaceful pursuits of agriculture and trade. They organised industrious and well developed states and kingdoms. Aitraya Brahmana mentions (VII. 18). "Andras, Pundas, Sabarus, Pulindus and Mutibus". This clearly indicates that though the Aryan conquerors have been in the nothern part of India for many centuries, if not longer, they have not yet been able to develop a state, as no such geographical designation is found in any of their contemporaneous literature ; while the Dravidians, though terribly vanquished by the new Aryan invaders, and those who survived compelled to leave their soil and retire behind the rampart of the Vindya Range and suffered thus an irreparable disaster, yet their kingdoms in the south were still unshattered, powerful and capable of offering resistance and resisted bravely every encroachment on their rights.

Who are these wonderful people—the Dravidians ? Here opinions vary. But the recent explorations in

Chaldea, Babylonia and Persia, the archeological researches and the decipherment of the ancient tablets and records are showing an unmistakable way and are solving the problems that baffled the scholars before.

The Dravidians belonged to that dark Accadian race who developed such an early and marvellous civilisation in Chaldea and lower Babylonia. Perhaps they were forced to migrate by the Semitic incursions and conquests or pushed forward to new lands as an urge of racial expansion. However they were wide-spread. Not only the Aryans had to fight with them for the possession of the coveted land in desperate sanguinary wars, lasting for centuries in India, but the same thing had been gone through in Media and Iran as the reading of the Zend-Avesta clearly indicates, and the Dravidians were simply called by their generic name the *Turan*. In Beluchistan, there is still the remnant of the same race, known as Braui and there is now a little Iranian and Semitic infusion of blood in them, and they speak yet the agglutinative Dravidian tongue.

And there was hardly any insurmountable difficulty to emigrate from Chaldea and Iran to India in large number as it presents to-day. The Mesopotamian (between the rivers) civilisation developed in the post-glacial period in that vast and inexhaustively fertile lower basin, immensely enriched by the deposit of the alluvium brought by the swollen rivers from the melting glaciers. The great system of irrigation for which the land was far-famed, was only developed when the civilisation was far advanced and the abundant water-supply from the molten ice-fields was being rapidly diminished and they can be still traced throughout an extensive territory,

once the most productive and prosperous region of the world, but now barren and desolate by the destruction of that splendid system of canalization through ruthlessness and savagery of war and negligence of man, and where millions lived in plenty, there hardly a few nomadic Arabs now barely eke out a miserable existence. But by the time the Dravidians traversed the region now arid and forbidding, it was well-watered by numerous streams and lakes out of glacial reservoir in the mountains which were still covered in the higher range at least with an icy mantle. And moreover there were possibly numerous marshes full of rich pasturage for the cattle. It should not be forgotten that what is now Shahara, Arabian, Persian, Thor (Rajputna desert) and Gobi deserts, was one day one large continuous ocean and the Mediterranean, Black Sea, Azov and now the land-locked salt lakes, Caspian, Aral, L. Van, L. Urumiya (in Armenia) and the Dead Sea are but the shrunken relic of their past. Possibly their waters were emptied by the stupendous elevation of the Himalayan system, the back-bone of Asia. But there were enough depressions left filled with water, whose evaporation would have laden the air with aquatic vapour and caused precipitation of rain. Even in historic times, Turkestan was not so arid as is evidenced by the travels of the Chinese pilgrims to India and Khotan Daria once so flourishing and prosperous Buddhist country is now entirely covered with desert sand. In Persia one sees the vivid testimony of the same fact all around. From the main roads one can not fail to observe the terraced mountain slopes, once cultivated with industrious and ingenuous system of irrigation, as one sees even to-day in Cashmere and

Afganistan, now entirely dreary waste, and the waterless forsaken wells and empty walls of deserted and ruined houses standing as a ghostly mockery to tired and thirsty travellers. Alexander even found large trees enough on the Indus to build a great fleet to carry his large army and equipment to Babylonia.

The Akkadians though generally of peaceful habits, were not however cowardly. They fought bravely everywhere, in Akkad, Sumeria, Elam, Media, Iran and Gondwana (Pre-Aryan India). The Babylonian records, the Zend-Avesta, the Iranian traditions and the Vedas bear eloquent testimony to their valour, industry and integrity of character. When Akkad lost her freedom by the onrush of the Semitic hordes, Sumeria fought a hopeless war for more than a decade and Elam was only conquered by Sargon in 3800 B. C. Yet she did not hopelessly submit. She revolted and recovered her independence and in the year 2280 B. C. the Elamite king Kutur-Nakhkhunte was on the aggresive and carried away from Erech the image of the goddess Nanā. However though she was soon subdued after stubborn resistance, she was never reconciled to her fate and she was always an active ferment and fomented conspiracy and rebellion against the Assyrian suzerainty, and in which the priests always took the leading part, until about 640 B. C. when in rage Ashur-Bani-Pal (668-626 B. C.) almost exterminated the entire Elamite army on the banks of the river Itite, utterly devasted the land and reduced the whole country to a desert, plundered and razed Susa to the ground, desecrated the royal sepulchres and carried away the images of the gods and of 32 kings "in silver, gold, bronze and alabaster." This brought about the

disintegration and downfall of the mighty Assyrian empire and though the old lion still roared for a couple of hundred years longer, his nerve-centre was vitally wounded, his paws lost their deadly power and he was simply lying prostrate to be the object of prey of young rising powers.

The splendid civilisation of Babylonia was due to this Turanian people. The Semitic element was simply rapacious, blood-thirsty, fanatical, greedy and sensual, as it has always been. The Semites have never been constructive, but always destructive. They flayed alive the skins, pulled out the eyes, cut the tongue of the prisoners, made the kings draw the chariots as an amusement and cut their limbs and gave them to dogs as food. One can not read their part of history without a shudder in the soul. The Semitic Assyria hardly contributed anything worth remembering to the great Babylonian culture. On the other hand they only applied fire and sword whenever they could, as Sennaccherib enraged at the revolt of the populace, razed the holy city of Babylon to the ground in 691 B. C. and 'threw the rubbish into the Arakhtu (the southern canal) and never the city to rise again to disturb his tranquility' as he boastfully expressed it. But the metropolis of the western Asia rose again under her own king Nebuchadnezzar, and never was the imperial city so splendid and magnificent and the wonder of the ancient world, The secret of this quick resusciation lies in the fact that Babylonia proper (Akkad, Sumer and Elam) was chiefly inhabited by the Turanian people, who were thrifty, frugal, industrial and intelligent and though often acknowledged the Assyrian suzerainty, in their internal affairs they had never lost their

autonomy and they had their own Patesi (priest-king) and chiefs and the most powerful priestly class that dominated the policy and destiny of the Assyro-Babylonian empire and they were Turanian by birth and their sentiments were invariably with their own populace. But for the connivance of these priests, Cyrus could never enter into Babylon.

But even politically and militarily Semitic Assyria has not always dominated Babylonia in the splendid period of her history. The Kassites belonging to the Turanian race ruled Babylon for 576 years 9 months from 1780 B. C.

Of course the Turanian was a large family having many branches. The Mongolian group (Chinese, Japanese, Koreans) is ascribed by some to belong to the same family, as they speak the agglutinative language. But their racial characteristic is yellow-brown skin, black and straight hair, short stature, delicate constitution, high cheek-bone, flat noses, scantiness of hair on the body and the face and particularly oblique eyes. The oblique eyes as a special mark of the race is noticed even in the hieroglyphics of the Shang dynasty (second millennium B. C.). While the Akkadians and Sumerians as seen in the statuaries and stelles of Babylonia as well as found in Memphis* were of dark-brown complexion (chocolate colour), short stature, but of sturdy frame, oval face, stout nose, straight hair, full head ; they typically resembled the Dravidians, not only in cranium, but almost in all the details. In addition to that when it is remembered that both the Sumerians and the Dravidians had the same mythological back-ground, had the same system of reckoning numbers, weeks, months

* Sumerian heads, Records of the Past Vol. VIII. P. 130-135.

and the division of year and day and astrological calculations, worshipped almost identical gods, serpents and phallic symbols, kept alike temple-girls, had the same style of temple architecture as is manifest when one compares the Zikkurat and the Gopuram, and were accustomod to addressing the sister's children as *sons* and *daughters* and own brother's children as *nephew* which still survives among the Nairs in southern India, one can not avoid the conclusion that the Dravidians and the Sumerians had a very close racial affinity if they did not actually belong to the same stock.

Then came Aryas in successive waves of invasion. The earliest clans that settled in the Indus valley, watered by seven streams, driving out the Dravidians beyond the Vindays and possibly enslaving those who submitted, belonged perhaps to the pure *shukla* Aryan stock, if that expression is permissible in a racial designation. They arrived in India by the Oxus Kabul (cophen) river route, making junction now at Attock. At first they perhaps thought that the broad and expansive river was an estuary of the sea and called it *Shindu* and by that name to the Aryan new-comers the country was known and the Iranians lacking sibilant in their tongue, called it simply *Hindu* and in Greek it was converted into *Indos* as the Greeks had no aspirate *H* in their language. The principal tribes concerned in this armed immigration, were Atharvans, Agnirashas, Bhrigus, Jamadagnis, Atris, Vashisthas, Bharadvajas, Goutamas, Kasyapas, Agathas, Angiras, and Kanvas.

The Rig-veda mentions five races, *pancha manushya* (VIII. 9. 2), *pancha jana* (III. 37. 9 ; III. 59. 8 ; VI. 11. 4 ; VIII. 32. 22 ; IX. 65. 23), *pancha krshtaya* (III. 2. 10 ;

III. 53. 16) *pancha kshitayah* (I. VII. 9; V. 35, 2; VI. 46. 7; VII. 75. 4.) *pancha carshanah* (V. 86. 2; VII. 15. 2: XI. 101. 9).

Turvasa Yadu appear together I. 36. 18; IV. 30. 17; V. 31. 8; VI. 20. 12; VIII. 4. 7; IX. 61. 2; X. 49. 8. Anu appears I. 108. 8; VII. 18. 12; V. 31. 4. Druhyu appears in I. 108. 8, VI. 46. 8; VII, 18. 6. Puru in I. 36. I; IV. 21. 10; V. 17. I; VI. 20. 10; VII. 5. 3; VIII. 50. 6; 10. 4. I. Yadava in VIII. I. 31. 6; I 48. 46.

Of these five races, Turvasa, Yadu, Anu, Druhyu and Puru, Purus attained the greatest power (X. 48. 5). Purus were later called Kurus as we find in Chandogyaupanishad VI. 17, where these two terms are used synonymously. Perhaps it originated from the great Puru emperor, Kurusravana (Trasadasyava). Or perhaps it was from the name of their kingdom Panchala, which was, according to Satyapatha Brahmana, known before as Krivi.

Besides these five races, Nahusha people are also mentioned. Nahusha was a great king (vispati, I. 31. II). In the Mahabharata it is mentioned that he even overthrew Indra and took his place. That Nahusha people belonged to a different race is clear from their wish that their might should be equal to that of the five races (VII. 95. 2).

Panis were an avaricious commercial people and they did not perform the *soma* sacrifices (V. 34. 7) and they were without faith and religion (VI. 20. 4). Bribu, the merchant prince, rich in cattle and horses, however used to make generous contribution. But there used to be constant fight between the Panis and the five races (VIII. 53. 2; X. 60. 6.).

Their decisive victory over the Dravidians lay in the fact that they came in the late bronze and early iron period, armed with the latest military equipment, with bronze helmet, sword and armour, iron-spear, especially with war-horses and chariots, with which the Dravidians were unfamiliar, and as they could not run as fast as the Arya cavalry and generally being peaceful agriculturalists and traders, they were easily overwhelmed by the nomadic horsemen, well-seasoned and trained in warfare and who delighted in fighting.

Civilisation has always succumbed to well-armed, swift and hardy roving riders, for they can easily destroy the complex and delicate frame-work of civilisation and if they are defeated they can easily retreat, without serious loss, to their mountain or desert fastness. However one might shroud with a romantic halo a warrior or a warrior nation, the fact is, a soldier, especially in an aggressive war of conquest, has necessarily to be a brute and a savage. None with a human heart or sensibility of the soul, can kill, murder, make orphans of innocent children, cast an irredeemable pathos of misery, desolation and destitution over happy homes, burn homesteads and reduce productive soil and smiling gardens into a barren waste—and this is the soldier's profession. War easily rubs off the thin cultural veneer of psychic progress and refinement and plunges the soul into the ancestral atavistic state of crudity and savagery, rousing all the wild passions, and under its hypnotic spell—for it recalls the primitive ancestral memory—often even an otherwise conscientious man loses his balance of mind and turns out a brute. May be, this is the painful process of progress. By the cohering power of brute force, the tribes are moulded into

a kingdom and a state and states into an empire and by the commanding influence it exerts, it standardises and spreads to the neighbouring countries, the culture it has been able to absorb and to create by its power, patronage, wealth, leisure and the natural uplifting force in man in taking a special pride in exceeding others in abilities. This has hitherto been the history of the world. Civilisation acts as a solvent and when it has sufficiently softened the crude fibres and turned them into a delicate refined texture, they might shine in brilliance for a while, but soon lose much of their primitive strength and resistance. As soon as the conquering race becomes civilised enough to regard militarism as an unworthy profession or loves ease, comforts and pleasures of settled life rather than the privation and hardship of the army camp, some other hardier people come and oust him and take his place.

Thus after the ferocious Semitic Assyrians conquered the Sumerians and became in contact with them a little humanised and civilized, as is examplified in the time of Ashur-bani-pal (668-626 B. C.), a raid and an incursion of the Scythian horsemen shattered into pieces the mighty Assyrian, Egyptian and Median empires. And when out of these fragments the Iranians built up a powerful empire, which not only became the mistress of the western Asia, but challenged in turn the Hellenic states and the dreadful Roman legions for the then supremacy of the world, its might vanished, and its cultural influence practically disappeared, when swarms of nomadic Arabian horsemen fell upon the land, with sword in one hand and the Koran in the other, greed and rape in the soul and Allah on the tongue. Thus

when Greece built up a brilliant civilisation over the subjugation of the Pelasgian population, Roman barbarians came and conquered her, and Rome in its turn fell a prey to the Goths, Vandals and Huns.

But of these people, Aryas (Aryans) alone had the germ of progress in them and a wonderful aptitude of assimilating and learning things of intrinsic value and of fundamental importance. The Semites have hardly contributed anything worth to human knowledge. When the Assyrians won a vast and rich empire, they became pleasure-loving, and while they were revelling in their debaucheries and refined barbarities, it was the Babylonians who established famous temple schools of astronomy, sculpture, architecture and agricultural engineering. The Jewish history is one of continuous horrors of greed, rapine and incendiary, of torturing the prisoners for their amusement, as burying them into masonry, burning them in fire or flying out their skins while alive, and if they were not the first to inaugurate the system of slavery, out of their covetiousness, they started slave-marts every where and they were behind every army to make the highest bid, thus to induce the conquering hordes to make as many slaves as possible. And in every court they intrigued, conspired and incited for war, for in war they had a good lucrative business. And their monotheistic god Yahveh, is none else but the patron deity of the Beni-Israel, the Babylonian thunder-god Adad and who was later identified with the phallic god Baal with all the wild sensual orgies* of which the Old Testament is replete with illustrations.†

* See 'The Origin of Christianity and the Cross.'

† "The voice of the Lord (Yahveh) is upon the waters, the God

The Arabs had an extensive dominion in Asia, Europe and Africa, yet they did nothing to develop the lands and the resources or for art and sciences, as a permanent record of their power and prosperity, except to build mosques out of the materials of the most precious monuments of antiquity, which they stripped and tore down with ruthless vandalism and to translate and transmit priceless records of Hellenic and Roman culture, to Europe back again—her own glorious inheritance which she forgot, when she sank to the lowest depth of credulity, ignorance and superstition under the benumbing spell of a hallucinary fanatical semitic religion-myticism.* The

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of glory thundereth, even the Lord upon many waters, the voice of the Lord is powerful, the voice of the Lord is full of majesty (might). The voice of the Lord breaketh the cedars ; Yea, the Lord breaketh in pieces the cedars of Lebanon. He maketh them also to skip like a calf ; Lebanon and Sirion like a young wild ox. The voice of the Lord cleaveth the flames of fire. The voice of the Lord shaketh wilderness, the Lord shaketh the wilderness of Kadesh. The voice of the Lord maketh the hinds to calve, and strippeth the forests bare." (Psalm 29. 3-9).

* However the idea of translating foreign book did not start with the Arabs. The Gnostics who were electic in their religious faith and became very tolerant towards other creeds, began it, coming more or less under the Buddhist influence and Greek culture. The Arabs when they came into power, simply fostered and patronised it. Without question partly they assimilated the knowledge of which their language became the depository when like a baneful scourge, Christianity was withering the fountain spring of brilliant Greco-Roman intellectual activities. But they hardly added any worth-mentioning original contribution to it. The great Arab historian rightly says :—"We have shown how the chief centre of human knowledge was transferred from Athens to Alexandria in the country of Egypt. The Emperor Auguste after having had

Mongolian group of races (Chinese and the Japanese) is well known for its adaptability, industry and temperance. But in none of the races is there found such a combination of vivid imagination, of passionate ardour for an ideal, sensibility of the soul and practical common sense indeed

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Cleopatra executed, established two seats of learning, Alexandria and Rome. The emperor Theodore abolished schools in Rome and brought them to Alexandria. We have said still why under Omar son of Abd-el-Aziz, the chief seat of teaching was transferred from Alexandria to Antioch and how later in the reign of Motewekhil, it was transfered to Haran." (Kitab at-tanbih was Ischraf, VIII.).

Edesse not far off from Harran was the strong seat of the Gnostics and there the *Pechito* Bible was translated into Syriac based on Septuagint version. At Jondisabour in the province of Khuzistan, the Persian King Khosroes Anochirvan about 530 A. D. founded the famous school of philosophy and medicine which lasted up to the time of Abbasides. Ibas translated the works of Diodore of Tarse and Theodore of Mopsueste and some diverse writings of Aristotle. Probus translated and commented on Hermeneia and Organon. Paul-le-Perse composed *An Introduction to Logic* and dedicated this admirable composition to the Persian king Khosroes Anochirwan. (Journal Asiaique p. 312).

When Edesse was put to fire and sword by the fanaticism of the Christians as a pernicious seat of heresy and sophism, it could not damp her ardour and research for learning. Sergius-de-Rechaina (Arabic Rasain) translated some of the writings of *Galen*, *Categories* of Aristotle, *Isagoge* of neo-Platonist Porphyry. *Universe* and *Soul* attributed to Aristotle, from Greek into Syriac, which was then the current literary language of the southern Mediterranean. He also wrote some original works on *Logic*, *the cause of the Universe*, *Species*, *Space and the Individual*, and *Negation and affirmation*, which he dedicated to his patron, Theodore of Merv.

Thus the Arabs were slowly initiated into the glory of learning. But in the beginning they did not look upon Greece, but on Persia

as in the Aryan. The Mongolian race is very practical and has a marvellous gift for order and system, which is amply attested by her social ethics and organisation, which is resistant and at the same time flexible; but their genius has not been creative. The Semites also dreamed, but it

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and India as the true home of knowledge. In Hegira 156 (772 A.D.) a Hindu merchant came to Bagdad and presented to Caliph Abou Jaffar el-Mansour an Indian book of astronomy. It was translated by el-Fazari into Arabic known as *Sindhind* and became the starting point of Arabian school of astronomy. (M. Cantor: Vorlesungen uber Geschichte der Mathematik, Vol. I. p. 597; Masudi Golden Meadows, VIII. 291). The great astronomer Mohammed, son of Musa el-Kharizmi later in the reign of Mamun combined the Indian and the Greek systems, which was known as Arabic.

Masudi also mentions that *Panchatantra* was translated into Arabic *Kalilah et Dimnah* or *Fables of Bidpai* by Ibn el-Mokaffa, a well-known scholar of the time. *Thousand and the nights* came from Persia and was adapted and transformed simply at Bagdad. And (Masudi: Golden Meadows, IV. 90.) *Almagneste of Ptolemy*, *Elements of Euclid* and some *Pahlavil* and *Syriac* books were also translated.

However it was in 217 H. (832 A.D.) Caliph Mamun gave a great impetus to learning by founding an official bureau of translation, *Dar el-hikmet*. At the head of the department was placed the eminent scholar Honein, son of Ishak, who held the same position under the successors of Mamun, Motasim, Watik and Motewekkil. Honein was born at Hira in 194 H. (809 A.D.). His father was an apothecary of Ibadite family and when he was young he came to Bagdad to study medicine. But finding it unsatisfactory, he went to Byzantium (Constantinople), where he learnt Greek, studied medicine for two years under reputable masters and brought back with him many valuable manuscripts. With the collaboration of others, especially Abu Katir Yahya son of Zakarya and Saadya Gaon, Honein translated the Bible into Arabic. Honein also

was either about the hoarded wealth of other peoples which their covetous hearts longed for or the enchanting vision of voluptuous *Houries* in paradise with seductive black eyes to beguile pleasantly the idle hours, or it was simply the raving madness of a religious hallucinary. They

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translated into Syriac *Hermeneia, Generation and Corruption, Soul,* the book I of *Metaphysic* and part of *Analytic of Aristotle,* the works of *Hippocrate and Galen, Archimedes and Appolonius, Republic Laws* and *Timee of Plato,* the commentories of Themistius on the works of *Aristotle,* especially *Physic, Ethics, Categories,* and the book I of *Metaphysic.*

Ishak son of Honein translated into Arabic *Sophist of Plato, Metaphysic, Soul, Generation and corruption of Aristotle* with diverse commentaries of *Alexander of Aphrodisia, Porphyre, Themistius* and *Ammonius.*

Yahya son of Patric translated in Syriac Aristotle's *History of animals* and *Timee of Plato.*

Abu Ali Ysa translated into Arabic Aristotle's *Categories,* and *History of animals* with the commentary of Philiponus.

Tabit translated into Arabic *Oftima secta* of Galen and the commentary of Proclus on the *Golden Verse* of Pythagoras.

The mathematician Abu Jaffar el-Khazin (Ibn Ruh) translated the commentary of Alexander of Aphrodisia on Aristotle's 'Physic' from syriac into Arabic.

This vast amount of translation-work was not in vain. Soon sprang up independent writers, who assimilating the foreign thoughts, produced encyclopædic works of their own. They were called *Falasifah* (singular, failasuf), after Greek philosophos; (philos=loving+sophos=wise). Those who exclusively followed the native thought and were not influenced by the foreign cultural influence and intellectual investigation, that is men versed in theology based on Coranic traditions were called *hakim* or *nazir.* Shahrastani mentions about twenty names who were entitled to the honorific title of *failasuf* in the Arabian literature, of which the following were really distinguished: Honein son of Isha, Tabit son

never created any synthetic philosophy nor was there any attempt at the solution of the cosmic problems. Nor is there any germ of any investigation in the Bible or the Koran, as is found in the sacred books of the Indo-Aryan races.

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of Korrah, Yahya son of Adi, Yakub son of Ishak el-Kindi, Mohamed Abu Nasr el-Farabi and Avicene.

Yakub el-Kindi had a great renown. Born of an illustrated pure Arab-tribe of Kindah of Kahatan race, he was really the founder of the Arab-school of philosophy and was called *failasuf el-Arab* (philosopher of Arabia). To him are attributed the authorship of nearly 265 works. He translated into Arabic the Book (n) of Aristotle's *Metaphysic ;* commented on the first and the second books of *Analytic ;* made abridged translation of *Hermeneia, Isagoge* and *Poetry ;* wrote a treatise on *Categories* and *Order of the books of Aristotle.* He translated also the *Geography of Ptolemy* and re-made the geometrical works *Elements of Euclid* and *Almageste of Ptolemy.* EL-Kindi composed a monumental psychological work on *Intelligence.* His notable disciple was Abu Said whose *Book of creation and history* holds a distinguished place in the Arabic literature.

Hohammed son of Tarkhan Abu Nasr el-Farabi, however was the most popular philosopher before Avicene. He did a prodigious labour. El-Kifty wrote of him thus : "He surpassed all his contemporaries and surpassed them in the explanation in the books of logic ; he cleared their obscurity, discovered their hidden meaning, facilitated their understanding and condensed the most useful parts in an incomparable lucid style and showed the defects which escaped el-Kindi. Farabi wrote *Introduction to Logic, Compendium of Logic,* commentaries on *Isagoge, Categories, Hermeneia, Ethics, Rhetoric* and *Organon.* He also wrote many metaphysical treatises as *Intelligence and Intelligible, Mind, Unity and one, Substance, Time, Space.* Science neither escaped him. He wrote commentaries on Aristotle's *Physic,* Ptolemy's *Almageste* and wrote treatises on *Meteorology, Movement of the celestial bodies, The heaven and the*

However to judge the Aryans from an ideal or the present standard, they would not appear in a very favourable light, though they might fare better in comparison with the Semites and the Mongols. We must not forget the crude times in which they lived. They were also

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universe. On occult sciences he wrote on *Alchemy*, *Geomancy* and *Dreams.* El-Farabi was called *el-moallim et-tani* (the second master), after Aristotle being the first. However to the popular mind el-Farabi was known as a political idealist and visionary by his celebrated work on political philosophy, the utopian *Model-city* after the fashion of the ideal *Republic* of Plato. It fired enthusiasm and caught the fancy of generations of men, thus creating discontentment with the existing order, and germinated more or less the cause of the disintegration of the mighty Saracen empire.

When Avicenna (Ibn Sina 980-1037 A. D.) appeared, the vast and extensive Arab Dominion brought under one central suzerainty by fire and sword, was already in decrepitude and was splitting up into fragments. Avicenna was the last and the most brilliant of the Mahameddan intellectual genius.

Abd Allah Sina, the father of Avicenna was originally a resident of Balkh, but moved to Bokhara where he practised the profession of a money-changer. Abd Allah was a liberal man. He had two children, of which Avicenna was the eldest, born of his wife Afshana in the suberb Kharmeitan in the year 375 H. Avicenna received a good education and was a brilliant and industrious student. Abd Allah became a convert of Egyptian Ismalian faith and he harboured the missionaries in the house and from their conversations young Avicenna learnt with avidity the strange doctrines of metamorphosis and immortality of the soul and they taught him also the secular arts, the Greek philosophy and geometry and Indian calculations, the last of which he followed assiduously with the instructions of a Hindu grain-merchant of Bokhara. He later became the pupil of Ibrahim and Natali, but the *Metaphysic* of Aristotle remained to him incomprehensible though he read it 40 times before he found out by chance el-faribi's commentary on it

covetous and wished for other people's property, wives and daughters. But they were not so cruel perhaps. They were imbued with strong feelings. They had the potential germ of great progress when mixed with the other races, especially the peace-loving and contemplative Turanian.

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and all the obscure passages became clear to him *and the gate of science lay open to him* as he navely expresses it and the next day he distributed plentiful alms to the poor of the city as a thankfulness to Allah's magnanimity.

Avicenne was a voracious writer though he was compelled, due to the political unsettled conditions of the translational time, to fly from country to country sometimes under distressing circumstances of penury, poverty and danger of life. His chief writings are *Shifa* and *Najjat* encyclopædic works on science, medicine, mathematics, physics, logic and metaphysics. However his *Isharat* an abbreviated expression for *Kitab el-isharat wattanbihat* is no less important. His other compositions are : *el-hikmet el-arundiet* (Philosophy of Arundi), his first writing dedicated to the name of his patron ; *el-hidaiet fil-hikmet* (Guide of wisdom) ; *et-talikat fil-hikmet el-filsafiet* (Notes on Science of Philosophy) ; *Oyoun el-hikmet* (Fountains of wisdom) ; *Kitab el-ansaf* (Book of fragments) ; *Kitab el-mojjah el-kebir fil-mantik* and *Kitab el-ausat* books on Logic ; *fi takasim el-hikmet wa l-olum* (Divisions of sciences) ; *risalet finnefs* (Epistoles on Soul) ; *Monazarat fin-nefs* (Opinions on Soul) ; *fosul fin-nefs* (Chapters on Soul) ; *fil-Kowa el-insaniet wa idrakatiha* (Human faculties and their perceptions) ; *risalet el-akhlak* (Treatise on Manners) ; *risalet et-tair* (Treatise on Birds) ; *risalet el-kodr* (Treatise on Destiny) ; *Kitab el-maad* (Book of Soul) on transmigration ; *hikmet el-maut* (Philosophy of Death) ; *el-hikmet el mashrakiet* (Oriental Philosophy) ; *hikmet el-ishrak* (Philosophy of illumination) ; *el-adwiet el-kalbiet* (Remedies for the heart diseases) ; *Or juzah el-manzamah* (Poems on Medicine) ; *risalet fil-Kimia* (Treatise on Alchemy) ; *fi alat rasadiet* (Instrument of Astronomy) ; he also wrote some other books as his famous *Medicinal Canon*,

The next stream of Aryan immigrants came from the higher Euphrates valley, more or less mixed with the native population and of swarthy *dhumru* complexion and they reached Dvaraka or Dvaravati (in Kathiwar) by the sea-route. † The chief tribes consisted of Yadus (Yadava-janas), Purus, Drhyus, Anus, Turvasas, Bharatas (later absorbed in the Kurus), Tritsus, Matsyas, Cedis, Krivis (later known as Panchalas). They at first settled in the maritine province of Dvaraka and one of the Yadava chieftains married the daughter of king Mandu, but according to the Jaina legend, they later migrated to Panchala, owing to a terrible earthquake in which many Yadava princes perished and they established a powerful kingdom in the Madhya-desa under the leadership of the Bharatas, from which the country has been since designated as *Bharatabarsa* (the abode of the Bharatas).

These new immigrants were well-fitted for empire-building. They were in contact with the two most powerful empires of the then world, namely the Egyptian and the Assyrian which were hoary with age and traditions.

Chapters on Hippocrates on Medicine, Fevers and Tumours; the astronomical works as *The situation of the Earth in the Universe*, and in Persian he composed *Hikmet el-Alai* a book of philosophical aphorisms after the name of his patron.

As the biographer of Avicenne beautifully expresses that Avicenna *had the most powerful soul; but his dominant faculty was erotic which occupied him often* and by its undue indulgence he sapped his vitality and breathed his last at the premature age of 58 in 428 H. and on him ran this popular satarical saying: "Sheikh el-Rais has made no utility of his Science of Medicine and Science of Astronomy. Neither his *Shifa* has cured him of the pain of death nor *Najjat* has saved him."

† Kathake Sanhita, XI. 6. Vedic Index, Tol. II. p. 247.

The Vedic tribes who preceded them and came by the Oxus-Kabul river route and settled on the banks of the Indus and her tributaries, knew nothing of this nation-building process. They were content with the tribal state or City-state, of which their fellow brethren in Greece made a brilliant example. For we find when Sudas, chieftain of the Tritsu clan won a decisive victory on the banks of the river Parushni, over a confederacy of ten clans, he did not know how to take advantage of the opportunity and to consolidate them into a powerful state and kingdom, while in the Madhya-desa we find extensive and powerful kingdoms and magnificent courts.

Perhaps they immigrated to India, between 1800 to 1400 B. C. due either to a military disaster with the Assyrians, or to a tribal feud, for the Aryan tribes were very quarrelsome, and though they often combined against a commrn enemy in self-defence, they always fought among themselves when there was no external danger.

A recent discovery of some Hittite tablets, made by Mr. Wincler at Boghazkeni in 1906, gives an important clue and probably the key to the solution of the problem. The following is the content of a tablet, a treaty between Shubbiluliuma, king of Hatti and Mattiuaza, king of Mitanni, son of Dushratha or Tushratha and everything indicates that both of them were Aryan kings.*

* Mr. Winckler published the purport of his famous finding in M. D. O. G. No. 35 (1907) with partial translation of the Hattite treaties and the Harri-Aryan question in O. L. Z. 1910, cals 289 f and the entire text of the treaty appeared in 1916, entitled *Keilschrift-texte aus Boghaskoi* and this has been translated into English by Mr. D. D. Luckenbill and published in the American Journal of Semitic Languages and Literature, in Vol. XXXVII, No. 3 (April 1921).

TREATY-TABLET, BETWEEN SHUBBILULIUMA OF HATTI AND MATTIUAZA OF MITANNI.

Obverse.

1-16 :—*When with the Sun* Shubbiliuma, the great king, the valiant, the king of Hatti, the beloved of Teshub† Artatama, the king of Harri made a treaty and thereafter, Tushratha, king of Mitanni, exalted himself against the king of Hatti, the valiant (then I) the great king etc. exalted myself against Tushratha, the king of Mitanni, the lands on this side of the river (west of Euphrates) I plundered and Mount Niblani I restored to my dominion. A second time Tushratha, the king acted presumptuously toward me. Thus he spoke : "Why dost thou plunder that side of the Euphrates which belongs to Tushratha, the king ? If thou dost plunder the lands on that side of the Euphrites, I also will plunder the land on that side of the Euphrites. Tushratha, the king is desirous of keeping this (region) intact, but if thou plunderest them (these lands), what am I to do for them ? I shall cross over to this side of the Euphrites 'whether it is lamb or a child I hear ?'. (Whereupon I) the great king displayed (my) might before him. Now against the father of the king of Hatti Ishuwa had rebelled. The Hittites entered Ishuwa (country). The people of Kurtalisha, the people of Arewanna, Zassha, Kalamash, Timna, Mount Haliwa, Mount Karna, the people of Durmitta, Alha, Hurma, Mount Harana, half the land of Tegarama, the people of Teburzia, the people of Hazga, and the people of Armatana, against my father they rebelled. But (I) the Sun Shubbiluliuna, the great king etc. defeated them. At that time the people who had escaped from my hand, these entered Ishuwa, and whatever peoples or lands there were that rebelled against my father, these as subjects of Ishuwa in the midst of hostile land were dwelling.*

17-24 :—*Now (I) the Sun Shubbiluliuma, etc. took measures*

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* A title of loyalty of the Hittie kings.

† The chief god of Hatti identical with the Babylonian storm-god Adad.

against the presumption of Tushratha, the king. The Euphrates I crossed ; against Ishuwa I marched and Ishuwa in its totality I devastated. For the second time I brought them into servitude to me. The people and the lands who in the time of my father had gone over to Ishuwa, namely the people of Kurtalesha, the people of Arawanna, Zazzesha, Zegarama, Tuimina, Mount Halina, Mount Karna, the people of Durmitta, Alha, Hurma, Mount Harana, half of Tegarama, the people of Teburzia, the people of Hazga, the people of Armatana, those peoples and lands I conquered and restored them to Hatti. The lands which I seized I set free, their (former) place (s) they occupy. Indeed all of those peoples whom I set free, returned to their peoples and occupied their (former) places (s) in Hatti.

25-29, 6-10 :—*Again (I) the Sun Shubbiluliuma etc. marched against Alshe. The fortress of Kutmar I stormed and gave (it) to Antarathi of Alshe as a present. The fortress of Shuta I entered. The fortress of Shuta I took as my plunder. I brought (its booty) into Washukkani. Of the fortress of Shuta, oxen, sheep, horses, their property as well as their booty I brought back to Hatti. As for Tushratha the king, he marched against me, but he did not get into the fight.*

30-37, 11-19 :—*I returned, crossed the Euphrates and overpowered Halpa and Mukishhe. Tukuwa, king of Nia came to Mukishhe (to enter into) covenant with me. Behind the back of Tukuwa, Akit-Teshub, his brother roused land and city of Nia to hostility. And Akit-Teshub, won over these Marianna (lit. turned them to me), Hishmia, Asiri, Zulkia, Habahi, Parria and Niruwaei, together with their charriots and their men were brought into agreement with Akia, king of Arahti. They seized Arahti and rebelled saying : "Let us fight the great king, the king of Hatti." (I) the great king, the king of Hatti overpowered them in Arhati and seized Akia, king of Arahati, Akit-Teshub, brother of Takuwa, all of their Marianni, together with their possessions, I brought to Hatti.*

37-47, 20-28 :—*When I went against Nushashshi, I seized all of its lands. Sharrupshi escaped to distant parts. His mother, his brothers, and his sons I seized and brought to Hatti. Takilesharri*

the servant of Sharrupshi, over Ukulzat as king I set. Then I marched to Abina. But I had no thought of attacking Kinza, when Shutatarra with Aitakhamma, his son and his chariots marched out against me to give battle. I defeated him and they fled to Absuia. Shutatarra, together with his son, Marianni, his brothers and their.....(I seized) and brought to Hatti. Against Abina I marched and Ariwana, king of Abina, Luambadura, Akparu and Artaia, his nobles, came out against me to give battle. All of these, their land, together with their possessions to Hatti I brought. Because of the presumptuousness of Tushratha the king, for one year I plundered all of these lands and brought them to Hatti. From Mount Niblani, from that side of the Euphrates, I restored them to my dominion.

48-58, 29-39 :—*When his son waxed strong, with his servants he slew his father Tushratha, the king. And when Tushratha, the king died, Teshub gave a decision in favour of Artatama and his son Artatama he spared. But all of Mitanni went to ruin. The Assyrians and the Alsheans divided it among themselves. Up to this time (I) the great king etc did not cross the otherside (of the Euphrates); neither 'hama'* nor 'hussapa' of Mitanni did I carry off. Now when the great king etc. heard of the misery of Mitanni, the king of Hatti, sent palace servants, oxen, sheep and horses. But the Harri people became discontended and Shutatarra with the Marianni tried to kill Mattiuaza, the prince. He escaped and before the Sun Shubbiluliuma etc., he came. The great king spoke thus :—"Teshub has rendered a decision in his favour" Whereupon I took Mattiuaza, son of Tushratha, the king into my hand and placed him on the throne of his father. In order that Mitanni, that great country might not go into ruin, because his daughter looked upon Mitanni with favour (Shayambara ?), I the great king the king of Hatti took Muttiuaza, son of Tushrath into my hand and gave him my daughter in marriage.*

59-67 :—*(And I commanded) that Mattiuaza, the king's son, should be the king of Mitanni and the daughter of the king of Hatti should be queen over Mitanni. To thee Matiuaza, ten women*

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* 'Hama' is a plant; possibly Homa=Shoma.

are to be allowed. But no second wife is to be advanced over my daughter. Thou shalt not send a second wife into her presence. No one shall...her house. Thou shalt not bring my daughter into the position of a second wife. In Mitanni she shall (rule) as queen. The children of Mattiuaza and the children of my daughter, their children and their children's children shall (rule) in Mitanni in future days. And in future days the Mitannians shall plan no rebellion against Mattiuaza, the king's son, or my daughter, the king's daughter (or their) son's sons. Mattiuaza the king's son, in days to come (to my sons) shall be a brother, he shall be an equal of heirs and the sons of Mattiuaza, the king's sons or the sons of mine or grandsons of mine.....to my grandsons shall be a brother, he shall be an equal.

68-73 :—*The Hittites and the Mitannians in the days to come with an evil eye (shall not) look upon each other. The Hittites shall do no evil to Mitannians and the Mitannians shall do no evil to the Hittites. When the king of Hatti is at war with an enemy, then the king of Mitanni (shall seek the welfare of the king of Hatti) and when an enemy of Mitanni or an enemy of (the king of Mitanni appears) then the king of Hatti (shall seek) the well-being of the king of Mitanni.*

74 :—*(The son) of Mattiuaza (I) the great king, the king of Hatti* .....**75**.....*(any treaty) which I the great king shall make*..... ....**76**.....*the law of Mitanni*... ...

Reverse.

35-53, 13-29 :—*A copy of this treaty (tablet) was placed before Shamash (god) of Arinna, for Shamash of Arinna grants kingship and queenship. And in Mitanni (another) was placed before Teshub (Keshab?), lord of Kurinni of kappa. Kinship, yea, kinship, let them proclaim, before the king of Mitanni and before the Harri. And now if any one before Teshub, lord of Kurinni of Kappa, shall change this tablet or put it into secret place ; if he break it or alter the words of t e writing of this treaty, may the god of secrecy and the gods whom the one who has taken the both by the lifting of the hand has (invoked), may they stand and may they give ear. For they are the witnesses. Shamash of Arinna (Aryans?) who grants*

kingship and queenship in Hatti, Shamash, lord of heaven, Teshub, lord of Hatti, Sheri, Ashsharra, (of) Mount Nauni, and Mount Hazzia, Teshub, lord of trade, Teshub, lord of the camp, Teshub, lord of the relief, Teshub of Betiarick, Teshub of Nirik, Teshub, lord of mounds, Teshub of Halab, Teshub of Lihizura, Teshub of Shamhuha, Teshub of Hurma, Teshub of Sharishsha, Teshub of Shaganuwa, Teshub of Hishshashhappa, Teshnb of Tahaia, Teshub of ...bika, Teshub of Kizzulona, Teshub of Uda, the Lamassu (protecting deity) of Hatti, the Lamassu of Goraham, Zithariash, Karsish, Hapanta, the Lamossu of the plain, the Lamassu of the air, the Lamassu of the mountains, Liliwanish, Ea and Damkina, Telibina of Dnrmitta, Telibina of Hanhana, Isthar, Muttariha (brilliant), Ashgawaba, Nisaba, Sin, lord of the oath, Ishhara lady of the oath, Hebe lady of the heaven, Hebe of Halpa, Hebe of Uda, Hebe of Kiszulani, Zamama, Lamama of Hatti, Zamama of Illaia, Zamama of Arzia, Iarish, Lapnash, Hashmilesh, Hantedashshuish of Harma, Abaru of Shamuha, Gudahha of An... ...the queen of Kash.....Mamma of Tahurpa, Hallara of Dunna, Gaxbac of Hubeshna, Bilala od Landa, Niawannish of Landa, gods of Limahi, the gods of Habiri, the male gods, the female gods, all of them of Hatti, the male gods, the female gods of Kissadni, the gods of the earth, the river-god Namshara, Minki, Ammuki; Tusushi Ammizzadu, Alalu, Anu, Antum, Enlil, Ninlil, Nin-egal, the mountains, the rivers, the great sea, the Euphrates, heaven and earth, the winds, the clouds.*

54-69, 30-37 :—*Teshub, lord of heaven and earth, Sin and Shamash, lords of heaven and earth, Teshub lord of Kurinni of Kappa, Nurgel of Kurta, Teshub lord of Uhuslunma, Easharri, lord of wisdom, Ann, Antum, Enlil, Ninlil, the gods Mitrashshil,* the gods Nashatiaina, Ellalshu, Shamawuminushi, Teshub lord of Washshukkani, Teshub lord of all of Irrete, Partahi, of Shuta, Nabarwa, Shrubi, Ashur, the star, Shala, Nin-egal, Damkina, Ishwara, the mountains, the rivers, the gods of heaven and the gods of the earth, the words of this treaty may they stand and may they give ear. For they are the witnesses. If then Mattiuaza, the king's son and the Harri does not keep the words of this treaty, then*

* The god Uruwanshil, the god Indar.

Mattiuaza and the Harri, together with your land, together with your wives, together with your possessions, may the gods, the lords of the earth destroy you like radish (?) from its stalk (?) may they drag as from a 'bubaawahi' having no.....And then Mattiuaza together with the second wife whom thou shalt take and the Harri together with your wives, your sons and together with your land, in that they have no seed, may these gods who are lords of the oath give you poverty and want. And then Mattiuaza may they overturn thy throne. And thee Mattiuaza together with thy land, may these gods by whom thou hast sworn, break thee like a reed. Thy name and thy seed by the second wife whom thou shalt take, from the earth may thy seed be destroyed. And thou Mattiuaza together with thy land (like) a tablet set aside, not sent from the midst of Harri shall (thy) name perish. The land, may it be devastated and uprooted. The land of your country, truly it is 'sahu' which has been closed (?); it shall go under, it shall not survive. And then Mattiuaza and the Harri, you are enemy of the thousand gods. May they overcome you.

If thou Mattiuaza, the king's son and the Harri, this treaty and oath dost keep, then Mattiuaza together with thy wife, the daughter of the king of Hatti, his sons, his grandsons, the Harri together with your wives, your sons and your grandsons, may these gods keep you; and may Mitanni as of old may it return to its (former) position, may it prosper, may it grow. And thee Mattiuaza, thy sons and thy grandsons by the daughter of the king of Hatti, may they give thee the land of Harri (?) as an everlasting kingdom; may the throne, may Mitanni grow old.

Obverse.

1-9 :—*(When I) Mattiuaza son of Tushratha, king of Mitanni handed over to Shuttarna, son of Artatama (king of Harri) of Mitanni, Artatama the king, his father, did what was not right. His palace (?).....together with his possessions he wasted to give them to Assyria and Alshe, he wasted them. Tushratha my father built a palace, filled (it) with treasures, but Shuttarna destroyed it, he overthrew it. The.....of the king, head bands of silver and gold, vessels of silver from the 'house of vessels' he*

smashed and to none of the.....of his father and his brothers did he give anything. But toward the Assyrian, the servant of his father, who was bringing the royal tribute to him became friendly and the treasures he gave him as a gift.

8-20 :—*Thus (I) Mattiuaza, son of Tushratha the doors of silver and gold which Saushshatar, the king, the father, of my grand father has taken from Assyria by his might and power and had set them up in his palace in Washukkani and then Shuttarna in his meanness gave them back to Assyria. All sorts of precious vessels of silver and gold he gave to Alshe. And the palace of the king of Mitanni, together with its wealth and treasure he ruined, into the dust he brought it. The palace he destroyed and the houses of the Harri he ruined. He caused the nobles to be taken to Assyria and Alshe, he carried them off. They came back and in Taite they crucified them he ruined all of them. The Harri and Akit-Teshub (Achit-Keshab ?) then fled from before him into Karaduneash (Kar-dunya=Northern Babylonia extending over to Media) they entered. With two hundred choriots he fled. But the king of Karaduneash (Media?) took for himself the two hundred chariots and their belongings, all that Akit-Teshub had brought along. And Akit-Teshub and his Marianni he persecuted and tried to kill him. Against me Mattiuaza, son of Tushratha, the king, he fought, but I tore myself out of his hand. Through the gods of the sun Shubbiluliuma etc. I escaped by a read which was not they pursued us. The gods of the king of Hatti and the gods of the king of Mitanni helped us to come before the sun Shubbiluliuma."*

Because these tablets were inscribed in cuneiform, it does not preclude the idea that they were Aryan people. The very names of the men and the gods inspite of the perversion of a foreign phonetical transliteration, as Tushratha (Dasharatha), Indar (Indra) unmistakably show their Aryan origin. Babylonian lineal script was the fashion of the day. Everybody knew it in western Asia. We find that even the Egyptian governors in their private correspondence, used it with their own king

Amenophis IV. as the finding at Tell el-Amarna shows. King Dushratha in a letter to his daughter Gilukhipa, who was married to Pharaoh Amenophis III. (about 1400 B.C.) used the same cuneiform in the beginning, but after a few sentences, he reverts to a strange script, which has not yet been deciphered. Perhaps it was the primitive *Brahmi lipi* and which with the great Aryan exodus, from the northern Euphrates valley which the Hittite treaty indicates, was brought into India by the Dvaraka-Puri route. The son of Gilukhipa Pharaoh Amenophis IV. became an ardent worshipper of the sun-god of her mother Aton and in his ardour changed his own name from Amenhotp (Ammon is satisfied) to Akhenaton (pious to Aton) and he erased the name and the figure of the national god Ammon from the public monuments and temples and substituted for it the sun-disk with streaks of light radiating from it. This enraged and shocked the priests and the public sentiment to such an extent that he was compelled to leave the magnificent capital of Thebes whose patron deity was Ammon and build up a new capital in 1360 B.C. at Tell el-Amarna in the plain of Hermopolis on the edge of the desert and which he called Ekhataton (the horizon of Aton), and with the confiscated revenue from the temples of Ammon and the tribute from Syria and Cush, he adorned the new city of his god with munificence. But soon after his death which happened in 1350 B.C. the new capital and the new god was deserted and the seat of the empire was removed to Karnak with the restoration of the god Ammon-re as the head of the pantheon and Aton only as a minor deity.

The third and the last batch of important Aryan

immigrants came through the dizzy Chitral Gilgit passes and descended into the Gangetic and the Jamuna plains. Due to the increasing aridity of the Indus basin, there could not be any longer a continuous stream of peaceful settlers, who must have followed the footsteps of the first Vedic Aryan conquerors, with their wives, sons, daughters and cattle. The encroaching desert sands proved too formidable for that. So this last body must have been adventurous, bold warriors. And being unable to bring their women with them on such a risky journey, they took unto themselves wives, from the native population. So the Pandava chieftains who must have led this expedition, five brothers, Yudhisthira, Bhima, Arjuna, Nakula and Sahadeva took as their common wife Draupadi, a system of polyandry, still prevalent in Tibetian countries. Perhaps they were long settled in the border lands of Tibet and adopted their custom and possibly, due to a local insurrection or a foreign invasion, they were compelled to leave the country and they descended into the inviting fertile and rich Gangetic-Jamuna basin. Then Kaurava princes were ruling at Hastinapura over the Bharata tribes, who were the first to build up the empire and to extend the Arya might and prestige even as far as Lanka or Tambrapana (bright as copper) that is Ceylon, as is depicted in the Ramayana. The deplacement of the Bharata rulers by that of the Kauravas must have certainly caused much heart-burning and dissension among those Aryan tribes who came from the upper Euphrates valley and settled in the Madhya-desa and founded opulent and extensive kingdoms. The new adventurers, led by the Pandava chieftains with the connivance and assistance of the Panchala (Krivis), Yadava and Matsya

tribes and the military support of the powerful Dravidian ruler Krishna of Dvarka overthrew the Kaurava domination after a fierce and sanguinary struggle and established their own supremacy. After the Pandavas were well seated in power, the court-poets must have then found it opportune to ingratiate themselves into the royal favour, by inventing the story of the wickedness and treachery of Dhrita-rastra and the rape of Draupadi in his hands, thus to reconcile the public sentiment and to popularise the new administration.

The origin of the Pandavas as recorded in the Mahabharata, the book devoted to their praise, is also very mysterious. One can not but fail to notice in reading the great epic that the court-bards and compilers were trying to make the Pandavas appear in noble light to be so admired by the populace, but in spite of all their attempts, ugly facts peep out here and there to cast doubt on the proud geneology of the Pandavas and their exemplary character and heroic deeds.

Santanu was a great king of the proud lineage of Bharata. For his great qualities the kings elected him as *Samrat* (emperor). Santanu married Ganga and through her had a son, Devavrata who was popularly known as Visma. Once on an excursion to the woods on the Yamuna, he saw a pretty fisherman's daughter, who was plying ferry on the river and fell in love with her. But Satyavati, the fisherman's daughter, was obdurate. She would not consent to his love unless he promised to make her the queen and her son the heir to the throne. Santanu could not give such a promise. He loved Visma and Visma was highly esteemed by the people and he was unhappy. When Visma came to learn

this, he solemnly renounced his right to the throne and promised never to marry to avoid future conflicts. Satyavati before his marriage with Santanu, gave birth in unmarried state, to a son Krisna Dvaipayana. While plying a ferry-boat, she had aboard a passenger Parasara and love over-powered them both and Dvaipayana was the result. Santanu had two sons with Satyavati, Chitrangada and Vichitravirya. Chitrangada died before he attained his maturity. And Vichitra-virya also followed his brother ere long after ascending the throne, leaving both his queens Ambika and Ambalika childless. Satyavati asked her illegitimate son Dvaipayana to raise children with Ambika and Ambalika to preserve the Kuru family. Ambika closed her eyes at the dark and the repulsive look of Dvaipayana, and so it is said Dhritarastra was born blind ; Ambalika became pale and terrified, so her son was called Pandu. But as Satyavati wanted a healthy and beautiful offspring as a glory to the Kuru race, she asked her son to raise an issue again. Ambika and Ambalika being both unwilling to cohabit with him, they sent to the bed of Dvaipayana a slave girl and Vidur was born of this union.

Dhritarasta being blind, Pandu ascended the throne. Pandu had two queens, Kunti and Madri. Pandu being impotent, he asked his wives to raise children with others. It is said Judhistira was born to Kunti through Dharma, Bhimasen through Maruta and Arjuna through Indra ; Nakul and Sahadev were born to Madri through Asvina. Now Dhrma, Maruta, Indra and Asvins being mere deities, it is clear that the parentage of Judhistira, Bhima, Arjuna, Nakul and Sahadev being uncertain, it was ascribed to the gods. Kunti too before her marriage had an

illegetimate son whom she threw into the waters of the Ganges to escape the social odium, scandal and disgrace and the cast-away son was Karna, born of her union, as it is said with Surya, the sun-god. If Karna was really son of a god, why was she ashamed, why did she faint when she heard that Karna was present in the tournament ?*

It is evident that the Pandavas lacked respectable ancestry and the court-poets after their unfair victory attempted to give them one and in which they miserably failed.

Who were these great Aryans, whose children to-day more or less control the destiny of the world and whose language and traditions have been stamped almost on civilised humanity and where did they originate and when did they come to India ? Here opinions vary and none of these questions can be answered with definite assurance.

According to Virchow the Aryans originated in the orient ; in India according to Sclegel ; in Asia according to Link ; in Bactria according to Picket ; in the countries situated between the North Sea and the Ural Mountain (Huxley) ; in south-west of Siberia (Pietrement) ; in the central and the western region of Germany (Geiger and Loher) ; in Scandanavia (Jules de Klaproth). The philogists differ no less in their conclusions than the opinions of the afore-mentioned anthropologists. According to Friedrich Max Muller, in the south-west of Europe ; in Central Asia (Jacob Grimm, Pott and Sclegel) ; in the Volga region (Schrader) ; in the Baltic territory according to Hirt ; in Saptasindhava, according to Abinaschandra Das.

* Adi-parva, Chapters, 63, 95, 100, III, 123.

It may be possible that all these learned scholars may be partially right in their judgment. For the Aryans like all other races migrated from country to country for countless ages with the advancing and retreating glaciers and it is probable that they traversed all these territories.

There are two striking passages in the Zend-Avesta which are explanatory on the subject. One of them unequivocably proves that the Caucasus region was the home of the Aryan. Ahura Mazda says :—

"The first of the good lands and countries, which I, Ahura Mazda, created, was the Airyana Vaego, by the good river Daitya." Vendidad, I. 3.

Now as the river Daitya has been identified with the river Aras (Araxes of the Sassanian time) rising in the holy Mt. Ararat and falling into the Caspian sea, it is easy to imagine how from this central location the streams of Aryan immigration could scatter into different directions, one branch crossing the Ural passes (for at that time it is possible the Caspean sea extended to the Ural mountains and the Ural river was not yet formed and that region filled with silt) and entering into Europe, and the other branch entering into Armenia and the upper Euphrates valley and the Indu-Aryan branch migrating to Iran, Mouru (Merv), Bakhdhi (Balk), Haetumant (Helmend), Ragha (Rai), Vaekereta (Kabul), Haptahindu (Shaptashindu = the Punjab).

But this apparent simple solution is deceptive, for the next passage is disconcerting and robs us of such an easy victory. It says of another land which undoubtedly was the tradition of the race at that time :—

"There are ten winter months there, two summer months ; and those are cold for the waters, cold for the

earth, cold for the trees. Winter falls there with the worst of the plagues." Vendidad, I. 4.

It is certainly the memory of the Scandanavian sojourn. It clearly indicates that the Avestan Aryans knew of the northern regions where the winter lasts for 10 months and the summer only for the brief period of two months. And when the Teutonic settlers (the northern branch of the Aryans) arrived at the Northern country, they already found it occupied by a brunette people, less advanced, of crude stone age culture, of brachy-cephalic skull and of short stature. Kean and Repley think that they belonged to the Iberian wave of population that swept over Europe in the van of Celts. Hansen believes they belonged to the Alpine race. Their type was of dark hair and eyes, generally broad-skulled and of medium to short stature. They were not entirely wiped out by the invading Teutons, but many of them in the southern part especially in Denmark, where there was little chance for migration, were conquered and enslaved. Farther north they were driven into narrow strips of land along the coast or into the more heavily forested parts of the interior. The blond new-comers in the meanwhile helped themselves to the best land in the river-valleys and the grass-clad open spaces on the hill slopes, choosing territory which was desirable either for cultivation or for grazing.*

Many authorities belive that the Finns of the Sagas (Mongoloid Ural-Altic, short, dark brachycephalic race) were the same. Lapps perhaps entered from North-western lands and the Finns are a cross between the Teutons and the Lapps.

* Hansen—Old tidens Nordmaland, P 14.

This proves two things. Either the Aryans were a very new people which is contradicted from the forms of their physical development which we know from their legendary myths and sagas and the complexity of the structure of their speech (inflectional), the basis of all Indu-European language. Or some Negroid races migrated to northern Europe, which was very easy, as Europe was connected then with Africa and the Strait of Gibraltar is but of recent formation and if it did not, it could not any way impede their crossing it as we find the Nigritos peopling distant islands in Oceania and crossing the ocean in their frail canoes. We also find numerous Negroid skulls in southern France. In northern Europe they have lost a good deal of their pigments and become more or less bleached and their morphological structure modified as an environmental adaptation, the size of the cranium enlarged as a provision for the increasing neural cells, which had to be developed; for in a climate where the winter was severe and long, man had to use his thinking powers in order to procure shelter, food and raiment for such a durable confinement. While in a warm climate as in central Africa or Borneo, man had very few needs and he required little thinking to obtain them. He could sleep in trees, feed on berries, fruits and worms and on hunting and when he developed farther he could scratch the ground and deposit there the seeds of bananas, bread-fruits, cocoa-nuts or corns which needed hardly any attention and they were ample for his simple needs and sustenance. Self-preservotion and self-reproduction, aquisition of food and desirable mates for sexual needs* or the pang of

* Sexual tumescence is the end product of nutrition and the utility of the organic surplus energy.

hunger and love have been the two great schools of self-development in all ages for lower organisms as well as for man, the biotic impulse reacting on all of them alike. And during the great world-winter, the glacial epoch with its advancing ice-sheet, these northern wanderers were compelled to retreat southwards and in the Caucasus region they found a sense of racial consciousness and a happy dwelling place, until they were dispersed, either due to internal feud, foreign pressure or need of food-supply for the increasing population as an impetus for racial expansion. And every where they found the land occupied and invariably by a brachy-cephilic people. This necessarily made them as an aggressive-defensive measure, a hardy, well-disciplined fighting people.

At what age did the Aryans arrive in India? This question cannot be positively answered. Attempts have been made to ascertain it.

Aryas found in Shapta-Shindava Dassyus; Iranians fought them as Turans; the Greeks established their supremacy by conquering the Pelasgians; the Romans by subduing the Etruscans. The Dassyus and the Turans belonged to the same race and were possibly the offshoots of the Akadian and the Sumerian people. The Etruscans were but a western variety of the Pelasgians and probably were affiliated with the Ligurians, Iberians, and Libians, that settled in the Mediterranean basin, belonging to the same stock which Sergi calls the *Mediterranean Race.**

This opens an interesting vista. It is well known that the Lybians were the original inhabitants of Egypt. And Mr Rawlinson has found after close observation, and

* G Sergi: The Mediterranean Race, a study of the origin of the European peoples.

study of skulls, ancient sculptures and painting that the ancient Egyptians had Negroid traits. He says :—"The fundamental character of the Egyptian in respect to physical type, language and tone of thought, is Negritic. The Egyptians were not Negroes, but they bore a resemblance to the Negro which is indisputable. Their type differs from the Caucasian in exactly those respects which when exaggerated produce the negro. They were darker, had thicker lips, lower foreheads, larger heads, more advancing jaws, a flatter foot and more attenuated frame. It is quite conceivable that the negro type was produced by a gradual degeneration from that which we find in Egypt. It is even conceivable that the Egyptian type was produced by gradual advance and amelioration from that of the negro."* It is true that Egyptians once suffered a disastrous defeat from the hands of Ethiopians, who established a dynasty in the middle of the eighth century B.C. but it was ended before 600 B.C. They were known as the Kush by the Semites and Kesh or Ekosh in the hieroglyphics. They can not be identified with the terrible Hyksos (Shepherd Kings) who like a terrible, imperious and irresistable wave about the 17th century B.C. swept over Egypt wrought carnage and destruction to whatever they could lay their hands on, and who for the secret service, delivery of the military plans and system of defence to the new invaders by the Jews who were then taking asylum in the land to escape from a famine that was then raging in Palestine, made Joseph, the Israelite chieftain, a high dignitary and minister of state (Genesis, 46. 32-34). They were certainly some

* George Rawlinson : The story of Ancient Egypt, P. 24.

nomadic hordes from the Arabian desert as their deity *Anath* clearly indicates. From this it is clear that the Egyptians evolved out of the Negroid through gradual transformation, as lead evolves from radium through the reduction of its atomic electrons. And as it appears through the painstaking investigation of Sergi that the peoples habiting the Mediterranean basin were of one brachycephalic race with slight local variations, it might prove that the Caucasian race which is dolichocephalic and of which the Aryan (Indo-European) is a branch, might have developed those peculiarities for which the race is distinguished, through reactions of the climatic and geographical changes in its wanderings from Africa to Arctic regions and its retreat therefrom back to Caucasus through the Russian steppes and from which centre later, when the racial consciousness and language were fixed, it scattered again in all directions, either due to pressure of population or whatever other causes.

When did the Aryas come and settle in Shaptashindava ? This question, though often earnest attempts have been made, can not be answered with any positive assurance. Lexical criterion is no sure basis as F. Max Muller thought, though it might throw a broad searchlight and give a clearer perspective; neither mythology nor traditions. For they can be all borrowed by one race from another. Astronomical calculations based on the observations of the relative position of the stars and planets, as found in the Vedas, are neither very reliable; for the Vedic hymns might have been the traditional heritage of the race and were simply collated in India, though those observations were of remote ancestry and in distant lands. Archeology to a certain extent gives the

relative ancientness of past civilisations. In this respect the Aryans seem to be very young people.

Mr. Flinders Petrie has found wrought iron in a prehistoric cemetry at Gerzeh near Meydum of about 6000 to 7000 B.C.* There have been found also very beautiful and artistic Egyptian potteries of the same period, now scattered in all the principal European museums.† "The 1st to 3rd (Egyptian) Dynasties ‡ have left at Abydos large forts of brickwork, remains of two successive temples and the royal tombs. Elsewhere are but few other monuments. At Wadi Maghara in Sinai is a rock sculpture of Semerkhet of the 1st Dynasty in perfect state, at Giza is a group of tombs of a prince and a retinue of the 1st dynasty and at Giza and Bet Khallaf are two large brick mastabas with extensive passages closed by trap doors, of kings of the 3rd Dynasty. The main structure of this age is the step-pyramid of Sakera which is a mastaba tomb with eleven successive coats of masonry, enlarging it to about 350 by 390 ft. and 200 ft. high. In the interior is sunk in the rock a chamber 24 × 23 ft. and 77 ft. high, with a granite sepulchre built in the floor of it and various passages and chambers branching from it. The doorway of one room (now in Berlin Museum) was decorated with polychrome glazed tiles with the name of King Neterkhet."§

In Babylonia at the sea port of Eridu, was the great

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* Records of the Past, Vol. X. P. 315.

† Encyclo. Brit. Vol. IX. P. 75.

‡ According to Petrie, the 1st dynasty was about 5510 B. C., the 2nd dynasty, 5247 B. C., and the 3rd dynasty 4945 B. C.

§ Encyclo. Brit. Vol. IX. P. 74.

temple of Ea-the culture god. "It is now about 130 miles distant from the sea ; as about 46 miles of land have been formed by the silting up of the shore since the foundation of Spasinus Charax (Muhamrah) in the time of Alexander the great, or some 115 ft. a year, the city would have been in existence at least 6000 years ago".* Mr. Hilprecht, the scientific manager of the Pennsylvania University Babylonian exploration, found at Nippur a drain in terracotta built about 4500 B. C. (P. 401). And the famous Baal temple was built by Naran-sin (3800-3750 B. C.) (P. 391). The water conduit was erected on solid masonry by King Ur-gur about 2700 B. C. (P. 372) and there were T-pipe joints in the drainage system (P. 396). Corbelled brick arch has been found in good condition of the period of 2500 B. C. (P. 420) and a multiplication table in the Temple-library of 2300 B. C. as 5 adu (time) 1=5 ; 5 adu 2=10 ; 5 adu 3=15 ; 5 adu 4=20 etc. 5 adu 19=95 ; 5 adu 20=100 ; 5 adu 30=150 ; 5 adu 40=200 ; 5 adu 50=250 ; 25 adu 1=25 ; 25 adu 2=50 ; 25 adu 3=75 ; 25 adu 4=100 etc. 25 adu 19=447 ; 25 adu 20=500 ; 25 adu 30=750 ; 25 adu 40=1000 ; 25 adu 50=1000. 90 adu 1=90 ; 90 adu 2=180 ; 90 adu 3=270 ; 90 adu 4=360 etc. 90 adu 19=1710 ; 90 adu 20=1800 ; 19 adu 30=5700 ; 19 adu 40=7600 ; 19 adu 50=9500.†

From the cultural point of view, when Sargon (3800 B. C.) conquered Akkad, he found there magnificent temple-libraries and there were expert priest-astronomers, who predicted eclipses by means of the "Saros". And

* Encyclo. Brit. Vol. III. P. 100.

† P. 523, Hilprecht Explorations in the Bible lands during 19th century.

they discovered it long ago that this is cycle of 18 years 11 days or 223 lunations. These priest-astronomers not only computed the return of the planet Venus to a given starting point in the sky in exactly 8 years but they had also established similar periodic relations in 46, 59, 79 and 83 years respectively for Mercury, Saturn, Mars and Jupiter. They therefore became later quite competent to determine in advance the approximate position of the planets with reference to ecliptical stars which served as fiducial points for their determination and they predicted and announced in the temple notices generally a year ahead the times of the new moon and the calculated intervals to the first visibility of the crescent, from which the beginning of each month was reckoned ; the dates, the exact time and other peculiarities of the predicted solar and lunar eclipses as well as the heliacal risings and settings, conjunctions and oppositions of the planets. They were also well aware of the inequality of the daily motion of the sun, but misplaced by 10 degrees the perigee of his orbit and their sideral year was $4\frac{1}{2}$ *m* too long and they kept the ecliptic stationary among the stars, making no allowances for the shifting of the equinoxes. The Zodiac almost as it is to-day was arranged by them before 2800 B. C.

In China, according to 'Shu Chung' equinoxes and solstices were determined by means of the culminating stars in the third millennium B. C. and the emperor Yao about 2300 B. C. put to death two official astronomers for making an inaccurate prediction of a solar eclipse. They knew of the conjunction of the solar and lunar year in a nineteen year cycle. From hoary antiquity they made observations in the meridian, regulated time by

water-clocks and used measuring instruments of the nature of armillary spheres and quadrants. About 1100 B. C. the astronomer Chow Kung determined with surprising accuracy the ecliptic and there are cometary records in the official annals from 2296 B. C.*

In this relative comparison of the ancientess of civilisations, the Aryas make a very poor and pathetic showing. In the misty horizon of tradition, the western branch of the Aryans (the Greeks) fought the Trojan war in 1193 B.C. led by Agamemnon of Mycenae, when the gods and the mortals intermarried and lived together in happy comingling. However the Mycænian civilisation should not be confounded with the Minoan, which was that of the native population and the great Minoan palaces have been brought to light by recent excavations, at Crossus and Pheastus and an interesting royal abode at Hagia Triada (in Crete) with drainage, fine statuaries, artistic potteries, vases, oil-jars, and pictographic writing antedating the Trojan war by more than 1500 years. Of the eastern branch of the Aryans, the Medes appear for the first time in historic light, when the Assyrian conqneror Shalmenster II, in his war against the tribes of the Zagros, received tribute from Amadai and Sagon II in 715 and 713 B.C. sent expeditions against the Medes and subjected them "to the far mountain Bikni (the Elburz-Demavend)." And they had a hereditary caste of priests who were called *Athravans* (the fire-kindlers). In the second half of the 7th century B. C., Media recovered her independence and under Phraortes and his son Cyaxares, if Herodotus is to be believed, she became a very powerful kingdom, with

* Encyclo. Brit. Vol. II. P. 809.

Acabatana as its capital, and from that time Media ruled over the greatest part of Iran, Assyria, and northern Mesopotamia, Armenia and Capadocia, until the overthrow of the empire by the rebellion of Cyrus in the reign of Astyages, son of Cyaxares in 553 B. C.; and Cyrus himself became the ruler of the major part of the vast empire. The Babylonian king Nabonidus (747-734 B.C.) designated the Medians and their kings as *Mandas* (nomads), which is corroborated by a striking passage in the Zend-Avesta, as follows :—

"If they find it easier to remove the dead, than to remove the house, they shall take out the dead, they shall let the house stand and they shall perfume it with Urvasni, or Vohu-gaoma, or Vohu-kereti, or Hadha-næpata, or any other sweet-smelling plant.

If they find it easier to remove the house than to remove the dead, they shall take away the house, they shall let the dead lie on the spot, and shall perfume the house with Urvasni (rasan plant), or Vohu-gaona (benzoin), or Vohu-kereti (aloe), or Hadha-næpata (pomegranate) or any other sweet-smelling plant." Vendidad, VIII. 1. 2-3.

What can this removable house be but a nomad's tent or a reed-hut ?

The Iranian, a different way of pronouncing *aryan*, came later on the stage. They were by nature fierce and warlike tribes, like all nomads, and when they conquered Elam, which was too tempting to resist, they utterly destroyed it; its people were carried away and scattered, its princes slain or dragged into bondage, its cities and temples sacked and turned into dens for the beasts to lie in, its trees burned and irrigation destroyed. Teispes (Chishpaish) son of Chieftain, named Achaemenes occupied

it and assumed the title "Great king, king of Anshan." After his death Cyrus I (Kurush) occupied the throne of Anshan (Elam) while another son Ariaramnes (Arya-Ramana) ruled in Fars. Cyrus (559-530 B. C.) on mounting the throne of Babylon thus inscribes as to this geneology :—

"I am Cyrus (Kurush) the great king, the powerful king, the king of Tintir (the ancient name of Babylon), king of Shumir and Akkad, king of the four regions ; son of Cambyses (Kambujya), the great king, the king of the city of Anshan, grandson of Cyrus, the great king, king of the city of Anshan, great-grandson of Teispes, the great king, the king of the city of Anshan."

Darius (522-486 B. C.) or Darayavush as his Iranian name, made a similar inscription in the Behistun rock in which he says :—

"I am Darius the great king, the king of kings, the king of Iran, the king of nations, the son of Hystaspes (Vishtaspa), the grand son of Arsames, the Achaemenian.

Says Darius the king :—My father was Hystaspes ; of Hystaspes the father was Arsames (Arshama) ; of Arsames the father was Ariaramnes (Arya-Ramana) ; of Ariaramnes the father was Teispes (Shishpaish) ; of Teispes the father was Achaemenes (Hakhamanish).

Says Darius the king :—On that account we are called Achaemenians. From ancient times we have descended ; from ancient times our family have been kings.

Says Darius the king :—There are eight of my race, who have been kings before me ; I am the ninth. In double lines we have been kings."

However with all boast of Darius, the Iranian branch of the Aryans can not claim any respectable

antiquity and his ancestry does not go farther than the ninth century B. C.

Only the chief Hittite kingdom, the powerful state of Mitanni, as revealed by the recent treaty-tablet found in 1906 at Boghaz Keui the ancient Hittite capital, dated about 1400 century B. C., in which the names of the Aryan gods, as Indra, Varuna and Mitra appear, as well as the mythological names as Hari, Achit-Keshaba and Dasaratha, belonging to the solar dynasty, "extended its sway as early atleast as 2100 B. C. to Assyria proper".*

The arrival of the Vedic Aryas in Shapta-Shindhavas, can not be so definitely ascertained. The Rig-veda, the oldest collection of the Arya tradition and myths, seems to be an exegesis of their gods. Those hymns unquestionably are of different periods and of different countries, the precious heritage of the Aryas and they were systematized and edited very late when they advanced far into civilisation and cultural aquisition. However it seems they had not yet reached the banks of the Ganges, for we find that only mentioned in the tenth Mandala which is the latest addition. However the Indus and some of her tributaries were crossed, otherwise the Usha (the dawn-maiden) could not be addressed as one who "In shining light, before the wind arises, comes gleaming over the waters, making good paths". Bal Ganghadar Tilak, basing his views on the mention in Aitraya Brahamana of Prajapati (the personification of the Sanscrit year) trying to approach Rohini (constellation) and on the astronomical fact that the Indian vernal equinox once began when the year was in Mirgasira,

* Morris Jastrow: Aspects of religious belief and practice in Babylonia and Assyria, P. 27.

that is Mirgasira was in the Ritu-Basanta, divides the period of the Vedas into three : 6000 –4000 B. C. for Rig ; 4000—2500 B. C. for Sama ; 2500—1400 B. C. for Yajur. Pandit Bhagawandas Pathak in his "Hindu-Aryan Astronomy and Antiquity of the Aryan Race" says that he found the description of the planets in the Rig-Veda in the Orean Period, which he calculates about 5000 B. C. and the Judhistira era 2448 B. C., but unfortunately he does not cite his quotations. Shankar Diksit in his *Bharatya Jyotisha Shastra Itihasa* calculates that the Satyapatha Brahmana, Kanda II, was composed as early as 3000 B. C. which means that the Vedic period must have been at least 1000 years older. He bases his conclusion on a passage in the Satyapatha Brahmana, Kanda II, which conclusively proves that in that period Kritika naksatras rose in the east and must have been therefore, on the celestial equator, which was exactly the position 5000 years ago.*

In the Rig Veda, there is no direct mention of the planets and the stars as in the Atharva Veda, but it seems, the knowledge of them was implied in X. 55. 3 in which Indra shines in forty-three lights, which probably was calculated on the sun, the moon, five planets and 27 nakshatras. In 1. 162. 18. the sacrificed horse is ripped into 43 parts, perhaps to the heavenly lights, for the horse has only 36 ribs. And if this interpretation is correct, it carries us to the Vedic period between 2780—1820 B. C.

* Eta ha vai prachai dishona chyavante, Sarvani ha va anyani nakshatrani prachyai dishashchyavanti. Satyapatha Brahmana, Kanda II. "These (the Kritikas) do not sweve from the east, while all other Nakshatras do".

since the vernal equinox coincided with 'Krittica' n Tauri, which heads the Hindu system of stars, about 2300 B. C. these linar mentions might have been brought by the later Aryan immigrants from Mesopotamia or received through commercial communication from the same source, either by the Vedic merchants or the Phœnicians.

It is well known that the Brahmana period was contemporaneous with the great Kurushketra war (Kura-Pandava war). And according to the Hindu tradition Kali Yuga commenced with the "war" and the Hindu astronomers, calculate that 1921 is five thousand and twenty-one years after Kali Yuga commenced. This they try to sustain by two assertions. One of them is the statement of Arya-Bhatta and Baraha-Mihira, in his celebrated Brihat-sanhita, quoting the famous ancient astronomer Garga which says :—"The Munis (Shapta-rishis) were in Magha when king Yudhistira ruled the earth. And 2526 when added to Shaka-kala is the date of that king".* But this is contradicted by the Vishnu Purana in which Parashara says : (last section of part IV). "From the birth of king Parikshita (grandson of Arjuna) up to the installation of king Nanda,† it is to be known that 1065 years have passed." This really means that the Mahabharata war took place about 1500 to 1400 B. C.

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* Asanmaghashu munayah shashati prithivim Yudhisthire Nripatau ; Shad dvika panchadwiyutah Shakakala tasya rajna-sheha."

† The founder of the Nanda dynasty in Magadha, by the usurper, Maha-padma Nanda, son of Maha-nandin by a Sudra woman took place about 371 B. C.

The other is the astronomical argument, based on passages in the Mahabharata, as the following, which is described as evil omens by Vyasa, who failing to persuade Dhritarastra in stopping the preparation of war by his son Dhurjodhana, sees their fate thus in the sky. "There is a comet standing over Pushaya. Among the Maghas Mars is retrograde and Jupiter is in Shravana. Saturn is standing over the Bhaga-nakshatra and Venus shines over the Purbavadrapada. The white planet stands over Jyestha. Both the sun and the moon oppress Rohini. The evil planet stands between Chitra and Svati. The red planet making counter-retrograde from retrograde, stands over Shravana, the Rashi of Brahma. Jupiter and Saturn stand near Vishaka. The sun and the moon were eclipsed together on the 13th. I have seen Amavashya on the 14th day, but never on the thirteenth." It is really futile to waste time over absurd observation as the eclipse of the sun and the moon at the same time, retrograde movements of the stars, and as Rashis could not be introduced in Indian Astronomy before the contact with the Greeks which was about 327 B. C. this has only to be regarded as interpolation into the main body of the Mahabharata, by poets of later ages, with vivid imagination and fancies.

The position of the asterisms (nakshatras), even the minor planets are not mentioned in the Rig-veda except the names of two stars in the tenth Mandala which is the latest addition of the Rik-samhita. Howewer in the Atharvaveda in the nineteenth chapter, there is a list of stars and praising hymn for each of them. But the Atharvan was not regarded as a Veda even in the Budddistic period, where usually Tri-veda (Tri-veda=three

vedas) is mentioned. In the prose parts of the Brahamanas, especially of the Yajur-veda they are often mentioned and in the Sutra period at the time of the great grammarian Panini (about 5th century B. C.) the names of the stars are common. In one ofthe Brahmanas it is mentioned that Prajapati the lord of created beings fell in love with his own daughter and she fleeing from him in the form of a doe he pursued her as a stag and was only deterred from his incestuous chase by being shot with an arrow by the angry and indignant gods. And the whole story is illustrated in the sky—the innocent and lovely Rohini (Aldebaran), which means both *ruddy* and she-red-deer, the infamous Prajapati (Orion = Mrigashira = stag's head) in full career after her, but laid sprawling by the three jointed arrow (the belt of the Orion) shot from the hand of the near avenger (Sirius) which is even now to be seen sticking in his body.

The principal astronomers of India have been Aryabhatta in the 5th century A. D., Varaha-Mihira in the 6th, Brahmagupta in the 7th and Bhaskara in the 12th century A. D. Bhaskara composed the famous astronomical work *Shidhanta-Shiromony* or as it is better known by the title of *Surya-Shidhanta*.

According to Hindu astronomy, there is a *kalpa* (æon) of 4, 320, 000, 000 years and the *mahayuga* (great age) of 4, 320, 000 years, with its subdivisions of which the *kali-yuga* (the iron-age), the last section of the *great age* is computed to have commenced on February 18, 3102 B. C. at sunrise on the meridian of Ujjaini. And according to its teaching, all the planets and all their apsides and nodes, entered upon their motion of revolution together, at the commencement of the æon, from a

starting point Asvini (Piscium) and that they all revolve a given number of times in the æon, so that at the close they will come again to a universal conjunction at the same point in the heavens. According to Surya-shidhanta, a general conjunction of the planets at this point recurs at the end of every 1, 080, 000 years. So each has its defined number of circuits in the æon. But in their calculations, it is infinitesimally small. Thus according to four different treatises since the beginning of the æon the revolutions of Jupiter's apsis have been only 407, 390, 378, and 448 respectively.

However with tolerable accuracy the Hindu astronomy has been able to calculate the position of the planets and predict the solar and the lunar eclipses. Their calculations are based on epicycles and the table of sines, that is, the relation of the diameter to circumference is 1 : 3. 14136 and the equivalence of the square of the hypotenuse to the sum of the squares of the two legs in a right-angled triangle. This is a time-honoured method. The Babylonians used it and the Greeks learnt it from them and it was known to them as the system of Ptolemy. But it is not certain whether the Hindus learnt it directly from Babylonia with the astrological lore or through the intermediary of Greece. However it seems unquestionable that some Greek terminologies have crept into the Hindu system of astronomy as *lipta* the second of an arc from Gr. lepto the twenty-fourth part of the day, as *hora* from Gr. Ora and the centre of an epicycle of a planetary body as *kendra* from Gr. kedron. Besides, the Hindu astronomy suffered from defective observation, as will be shown by the following table prepared by the celebrated Sanscritist W. D. Whitney.

Positions and errors of Positions of the junction stars of asterisms :—

No.	Name	LONGITUDE, A. D. 560. Hindu	True	Error	LATITUDE. Hindu	True	Error	Star compared.
1.	Kritika	39·8	39·58	−0·50	4·44 *N*	4·1 *N*	+0·43e	Taury Alcyone
2.	Rohini	48·9	49·45	−1·36	4·49 *S*	5·30 *S*	+0·41	(*a*) Aldebaran
3.	Mirgashira	61·3	63·40	−2·37	9·49 *S*	13·25 *S*	+3·36	(*g*) Orinis.
4.	Adra	65·50	68·43	−2·53	8·53 *N*	16·4 *S*	+7·11	(*a*) Orinis.
5.	Punarvasu	92·52	93.14	−0·22	6·0 *N*	6·39 *N*	−0·39	(*b*) Gemin. Pollux.
6.	Pushya	106·0	108·42	−2·42	0·0 *N*	0·4 *N*	−0·4	(*d*) Cancri.
7.	Aslesha	109·59	112·20	−2·21	6·56 *S*	11·8 *S*	+4·12	(*e*) Hydræ.
8.	Magha	129·9	129·49	−0·49	0·0 *S*	0·27 *N*	−0·27	(*a*) Leonis,Regulus.
9.	P. Phalguni	139·58	141·15	−1·17	11·19 *N*	14·19 *N*	−3·0	(*d*) Leonis.
10.	U. Phalguni	150·10	151.37	−1·27	12·5 *N*	12·17 *N*	−0·12	(*b*) Leonis.
11.	Hasta	174·22	173·27	+0·55	10·6 *S*	12·10 *S*	+2.4	(*d*) Corvi.
12.	Chitra	180·48	183·49	−3·1	1·50 *S*	2·2 *S*	+0·52	(*a*) Virginis.
13.	Svati	183·2	184·12	−1·10	33·50 *N*	30·57 *N*	+2·53	(*a*) Bootis.
14.	Vishaka	213·31	211·0	+2·31	1·25 *S*	1·48 *S*	+0·23	(*i*) Libræ.
15.	Anuradha	224·44	222·34	+2·10	2·52 *S*	1·57 *S*	−0·55	(*d*) Scorpionis.
16.	Jyestha	230·7	229·44	+0·23	3·50 *S*	4·31 *S*	+0·41	(*a*) Scorpionis.
17.	Mula	242·52	244·33	−1·41	8·48 *S*	13·44 *S*	+4·56	(*l*) Scorpionis.
18.	P-Ashara	554·39	254·32	+0·7	5·28 *S*	6·25 *S*	+0·57	(*d*) Sagittari.
19.	U-Ashara	260·23	262·21	−1·58	4·59 *S*	3·24 *S*	−1·25	(*s*) Sagittari.
20.	Abhijit	264·10	265·15	−1·5	59·58 *N*	61·46 *N*	−1·48	(*a*) Lyræ, Vega.
21.	Sravana	282·29	281·41	+0·48	29·54 *N*	29·19 *N*	+0·35	(*a*) Aquilæ.
22.	Sravishtha	296·5	296·19	−0·14	35·33 *N*	31·57 *N*	+3·36	(*b*) Delphini.
23.	Satabhisha	319·50	321·33	−1·43	0·28 *S*	0·23 *S*	−0·5	(*l*) Aquarii.
24.	P-Bhadrapada	334·25	333·27	+9·58	22·30 *N*	19·25 *N*	+3·5	(*a*) Pegasi.
25.	U-Bhadrapada	347·16	349·8	−1·52	24·1 *N*	25·41 *N*	−1·40	(*g*) Peg. a Andron
26.	Rebati	359·50	359·50	0·0	0·0 *N*	0·13 *S*	+0·13	(*z*) Piscium.
27.	Asvini	11·59	13·56	−1·57	9·11 *N*	8·28 *N*	+0·43	(*b*) Arietis.
28.	Bharani	24·35	26·54	−2·19	11·6 *N*	11·17 *N*	−0·11	(*a*) Muscæ.

From this it is apparent that it is very hard to fix any definite date in Indian history before the Buddhistic period. Before that time there is no monumental record on which we can base unchallengable data. However from comparative philology, we can to a certain extent conjecture and guess, but necessarily, it has to be confined to vague hypothesis and beyond this at least for the present it cannot go any farther.

We know that in the fourth century B. C. under the Nanda dynasty lived the celebrated Vedic exponents as Saunaka, Katyana, Asvalyana and others whose works we still possess. In the Buddhistic Suttas we find the *Trivedas* repeatedly mentioned and the Vedic institution venerable with age and traditions. Buddhism itself was a protest movement against Vedic professions which degenerated with age into meaningless ceremonies and rituals and that necessarily must have taken centuries after the Vedas were fixed when the Vedic tongue deteriorated into Pali. The distinguished philologist and grammarian Panini lived in the fifth century B. C. and wrote his well-known Astadhya when the archaic and fluidic Vedic language was no longer spoken and was crystallized into standarizad Sanscrit. And we find in his Astadhaya that already there were treatises on the phoncetics against any corruption of that sacred literature, they were numbered and counted according to their divisions and chapters, and how many hymns each chapter contained and how many words each hymn. Thus the Rig-veda was commuted to contain 1017 hymns, 110 'valakhilas", 153, 826, words, 432, 000 syllables. The etymologist Yaskha lived between the fifth and seventh

century B. C.* and 'the numerous exemplary quotations occuring in the Nirukta conclusively show that he knew the Rig veda, the Sama-veda, the Atharva-veda, the Yajur-veda, and their pada-pathas, the Taittirya Samhita, the Maitruyani Samhita. the Kathaka Samhita, the Aitareya Brahmana, the Gopatha Brahmana, the Kausitaki Brahmana, the Satyepatha Brnhmana, the Pratisakhyas and some of the Upanishadas'.

This indicates that Yaskha lived almost in the Sutra period, when the Brahamanas were already compiled and from the Rig-Vedic to the Sutra period, it must have necessitated in the minimum one thousand years. And from the structure of its language and the tenor of its contents, it is easily discernible that the Rig-Veda is a collection of hymns of different ages. For in the tenth Mandala we find that the Aryas had reached the Ganges and caste was in a formative stage as is evidenced by the Purusha-sutram. As the first stream of Arya immigrants to the Shapta-shindu was of a nomadic pastoral people, haughty and exclusive, believing and worshipping the same gods, speaking the same language, hating intensely the Dasyus, whom they exterminated or drove beyond the Vindyas and whose land they appropriated, the formation of caste must have needed a few centuries to abate this hate and to make intermarraige between the conquerors and the conquered possible, especially when they brought with them their wives and daughters. This gives us a latitude between three to five centuries. So it is probable that the Rig-Veda was fixed between the twelvth and fifteenth centuries B. C.

* Laksman Sarup : The Nighantu and the Nirukta, p. 54

When did they begin to compose the hymns or rather when did they begin to reach Sapta-shindavas? This is more uncertain. However we find in the Rig-Veda, the epithet Asura given to Indra, (1. 3. 10) to Agni (1. 3. 7), to Varuna etc. We find also the golden *mana* mentioned (VIII. 67. 2).*

We know that Ashur was the patron deity of the Assyrians when they conquered Babylonia in the 14th century B. C.—the title Ashur was given to the southern gods, Marduk and Nebo, meaning lord or leader. Mina or Mana was the Babylonian coin as well as measure.

The nearest kinsfolk of the Aryas, the Iranians had also as their national god Ahura-Mazda, possibly a corrupted form of the Babylonian god, whom they, after the Assyrian conquest, designated as Ashura Marduk. The Iranians lacking sibilant in their tongue, *Ashura* could be easily converted into their language into *Ahura*. And Ashura-Mazda had also the same function as the Marduk. Ashura Marduk and Ashura-Mazda were both solar deities, almost equivalent to vedic Varuna or Greek Uranos or Ouranos, the god of the sky. Marduk is addressed as the "shining one", "the resplendent heavens" and he also like Ahura-Mazda receives the attributes of other gods, as the supreme ruler of all creation and gods. Here is a striking hymn to Ashura Marduk :—

"I pay homage to thy name, O Marduk,
the strong one of the gods,
The ruler of heaven and earth,
Glorious being, who alone is supreme,

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* *A no bhara vyanjanam gam asvam abhyanjanam sache mana hiranyaya.*

Thou possesset the power of Anu, the power of Enlil,
the power of Ea—rulership and majesty,
Thou art in control of all wisdom, perfect in strength,
Circumspect counsellor, lofty ruler, powerful and mighty,
Whose rule Anu praised as a preparation for the conflict.
In heaven thou art supreme, on earth thou rulest,
wise counsellor,
Founder of all settlements, who holds the ends of
the starry heavens in his grasp."*

And compare this with the utterance of Ahura-Mazda in Zend Avesta, where he says :—

"I maintain that sky, there above, shining and seen afar and encompassing the earth all around. It looks like a palace that stands built of a heavenly substance, firmly established, with ends that lie afar, shining in its body of ruby over the three-thirds (of the earth); it is like a garment inlaid with stars, made of a heavenly substance, that Mazda puts on, along with Mithra and Rashnu and Spenta-Armaiti, and on no side can the eye perceive the end of it". Yast XIII. 4.

Who else could he be but Marduk or Varuna, who puts on the dress of the far-encompassing sky inlaid with stars and in Yasna I. II, we find the more convincing proof, where *the resplendent Sun, him of the rapid steeds, the eye of Ahura-Mazda* is mentioned as his distinct attribute? And in a bas relief of Perseplies, Ahura Mazda is represented, as hovering in the air, on a solar disk with radiating streamers, holding in his right hand something like an open lotus flower.† In the Assyrian

* Craig : Assyrian-Babylonian Religious Texts, p. 29-31.

† Coste et Flandin : Perse Ancienne, Pl. 156. Lenormant, Vol. V. p. 485.

sculptures Assur is also represented as floating in the air, on a solar disc with radiating streamers, exactly like Ahura Mazda, only the appearance of Assur is more martial and instead of holding a lotus in his hand, he holds bow and arrow, as befitting the patron deity of the warlike people like the Assyrians.*

But the god Ashur did not become prominent as to command respect before 2100 B. C., if not much later, as the thorough German excavation at Assur has shown. In the Tell el-Amarna finding the Cassite king of Babylon reproaches Amenophis IV. with recognising Ashur-uballit as an independent king of Assyria. As Assyria was a vassal state of Babylon, it indicates that in the fifteenth century B. C. she was gaining in power as to be able to assert her independence.† In the latter part of the century, the Cassite ruler Karaindash was compelled to make a treaty with the Assyrian king Ashur-rimnisheshu to respect the boundary as fixed between them. But the scale was soon turned and Assyria herself assumed the role of aggressor. And this was brought about through the marriage of the Assyrian princess Muballitat-Sherua, the daughter of Ashur-uballit (1380-1350 B. C.) with Karakhardash, the Babylonian king. This unholy alliance enraged the public sentiment to such an extent that they murdered the offspring of this marriage. This gave the pretext to the Assyrian king Ashur-uballit to attack Babylonia to avenge the murder of the grandson. Thus commenced the Assyrian empire and the portrait of Ashur appeared

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* Botta and Flandin : Les moduments de Nineve, Vol. II. Pl. 158.

† Knudtzon : Die, El-Amarna-tafeln.

on the top of Assyrian standards and was carried along on military expeditions and borne in the midst of the fray to symbolise the presence of the patron deity. After the supremacy of Assyria, Ashur gradully absorbed the attributes of other gods and even the epithet Ashur meaning *lord* or *leading* was given to the ancient Babylonian deities.

From this it is evident that the Aryas in Iran and Shapta-shindhavas could not borrow the epithet Ashura to their gods before 2100 B. C.

In the Rig-veda in the earlier collection of hymns, Asura is a noble appellation to the gods ; but later on it is an infamous designation of the Dasyus. This can only be explained on the theory that a second Aryan immigration came from the northern Euphrates valley in the Arrat region and as they hated the Assyrians which we have shown in the Mitanni-Hittite treaty tablet, they attributed the god of their enemies *Ashur* as an evil demon to the new enemies *Dasyus* they were confronted with in the land of their adoption. And they had not much difficulty in coming. The ancient world was not so restricted in its communication as it is supposed. Babylonians had a sea-going fleet in 2300 B. C. (The Code of Hammurabi). Egypt had a splendid fleet in the Red Sea under queen Hatasu (about 1530 B. C.) and in the bas-reliefs of the temple of Ammon at Tell el-Bahiri near Thebes, those magnificent sea-vessels were depicted marvellously, with crews and masts and with minute details and they can be still seen there at the present day.

Even in the Rig-Veda, 1. 116. 3-5, we find that Bhujyu was rescued from a ship-wreck by a hundred-

oared vessel, thus clearly indicating that the sea voyage was known in the Vedic time. In the Baveru Jataka* it is mentioned that Hindu merchants exported peapocks to Baveru. And Baveru has been indentified with Babylon.†

In a Hittite inscription have been recently found the Sanskrit odd numerals from one to seven in the forms of *aika*, *tiera*, *panza* and *satta* in close vicinity to the cuneiform signs of these numerals by wedge count and in a composition with the word *vartana* which in Sanskrit means horse.‡ It is true that the Hittite language is not clearly Indo-Aryan, but that the people were proto-Aryan is unmistakeably proven by their national gods as Mitra, Varuna, Indra.§ Emil Farrer thinks that the proto-Aryans crossed the Caucasus from the border-land of the Caspean sea and entered into the Hittite land about 2500 B. C. And their language by absorption was a synthesis of eight speeches, Summerian, Akkadian, primitive Aryan, Harian, Proto-Hittite, Luvian and Pataic.‖

These Aryans who came from Mesopotamia possibly also brought with them the idea of *Dig-vijay* the conquest of four regions, for we find Naram-sin about 3750 B. C. took up the title of "the king of four regions" after

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* Fausboll : Jatakas, Vol. III. p. 126

† Babylonian and Oriental Record, Vol. III. p. 7.

‡ Jensen : Sitzungsber. der preuss. Akad. 1919. P. 367 ; Sommer : Hethitisches : Boghaskoi-Studien, 4 Heft, III Stuck, 1 Lieferung 1, p. 2.

§ Higo Uinckler : Mittheilungen der Deutscen Orient Gesellschaft. No. 35 ; Carl J. S. Marstrander : Caractere Indo-Europeen de la Langue Hittite. Christiania, 1919.

‖ Emil Farrer : Die acht Sprachen der Boghaskoi-Inscriften : Sitzungber. der preuss, Akad. 1918, p. 1036

bringing under his control Akkad. Subartu, Elam and Amurru which lay in south, north, east, and west respectively.

From the foregoing observations it can be reasonably inferred that the first batch of the Aryas reached Shaptashindavas about 2500 B. C. and they were in constant communication with their kinsmen in Bactria and Iran or rather the whole territory between the Oxus and the Indus was settled by the Aryas, displacing the native Turanian population. The next body of the Aryas came through the sea-route and possibly landed at Darikapuri or Duravati which was then on the sea-shore.* They were the empire makers. They built up powerful dynasties in the Madhya-desa. It is one of their princes of the Bharata tribe under the leadership of Rama who made a military excursion or rather a raid in southern India extending up to Lanka about 1500 B. C. and with the assistance of some local chiefs as Shugriva and Bivishana subdued the rest, thus spreading over India the Aryan culture and institutions. The third band of Aryans, led by the Pandavas about 1250 B. C. descended on the plains from the high mountain passes and in the sanguinary struggle for supremacy defeated the Kaurava rulers at Kuruskhetra.

The enervating climate, excessive fertility and wealth of the Gangetic plains and chiefly the Buddhistic influences which induced the Khatriya youths to give up their defensive weapons and to put on the peaceful yellow robe and enter into monstaries, where celebacy was enjoined, and the military profession was regarded unpious

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* Sea-faring merchants mentioned in the Santi Parva, Ch 169.

and sinful, made India helpless against any foreign invasion. And from the northern gate began to pour fourth the deluge of foreign hordes. Firstly came the Yavanas (the Ionians), whose contact exerted the only beneficent influence India ever received from any foreign invasion. But the martial strength of India was not yet sapped of its vitality; roused by the shock, she soon drove the invader out of the country.

Then about 150 B. C. came the terrible Sakas. It was a mixed race of Turki, Tartar, Mongol and Iranian tribes. According to the Chinese chronicle about the second century B. C. Yueh-chi a Turki tribe attacked by a Mongol tribe Wu-san migrated southwards and overran the peaceful kingdom of Tohai, Tochari, or Asoi of Strabo, a peace-loving pious Buddhist community, inhabiting what is now known as Khotan Daria speaking an Indo-Aryan tongue *Arshi* and using Kharosthi as their alphabet. They soon extended their domination over Parthia and Bactria. They were known then to the Chinese as Sai-wang, which means the same thing as the Sanscrit Suka-muranda, that is Saka lords. Within a few years Afghanistan and northern India came under their control and they established satrapies at Taksha-sila, Mathura and in Kathiwor. They were succeeded by a Bactrian clan Kue-shuang, known in Indian history as Kushana, of which Kanishka was a famous Buddhist ruler. The Kushan empire was vast and extensive. It included the whole Central Asian plateau A Parthitn clan also came after them and they are known as Pahlavas.

But as soon as the softening infuence of Buddhism was acting on them and they identified their destiny with that

of India and gradually became absorbed in the populace, then came a greater scourge, the invasion of the Scythians. They overran eastern Europe as well as the whole central and western Asia. They were ferocious nomads living on horse back, wearing skin-dress out of the frayed skins of their fallen enemies and making drinking cups out of their skulls, and all their savage barbarities have been minutely described by Herodotus in his fourth book. It is also corroborated by a few passages of Hippocrates in his celebrated book *Peri æron. gdaton, topon* (17-23).

Who were these vicious Scythians? It has been as yet an ethnological mystery. All that we know is that they lived a nomadic life on the Russian steppes bordering the Caspean. We also know there have been great displacements and migrations, exterminations as well as absorptions of races in central and western Asia. Races are all mixed. Of course no pure race could be found, but here it is more confounded. The Scythians spoke an Iranian-Ugrian dialect and they caused rapine, carnage and destruction where-ever they went. They were not fit for a settled, civilized progresive life. Perhaps the Scythians were a mixture of Mongol, Tartar, Slavish, Ural-altic, Median and Iranian tribes. They were also known as *White Huns*. About 495 A. D. these rapacious hordes reached India. It is a general impression that Buddhism was rooted out of India by fanatical Brahmanism. It is far from truth. There has not been any religious war. The fact is that Mahirgula, a Scythian overlord in northern India, took it as his amusement to pillage and spoliation of the monastaries, massacre of the monks and the brutality and violation of the Bhikshunis (nuns). Thus Buddhism

was driven out of India. And the infuriated, but helpless populace felt the necessity of the re-organisation of the Khatriyas to rid the country of these foreign monsters. And under the leadership of the Brahmins this was achieved. A confederacy led by Narsingha-Gupta of Magadha and Jasho-dharman of Central India defeated Mihirgula and took him prisoner. He was sent out of India and his brother seized his throne at Sakala. The king of Cashmir invited him to be his guest, but by treachery dethroned him and obtained again the possession of the whole kingdom of Gandhara. And India was free from any foreign invasion for a few centuries and the Hindu social organisation was still strong enough to absorb and assimilate these foreign barbaric tribes into her body politic. When during this respite, India was healing and recovering from her old wound and by the industry of her masses and the extraordinary fertility of her soil, there was peace and prosperity every where and art, literature and science were blooming, then a blighting curse poured from the north-western flood-gate which lay open—an irresistible deluge of frenzied, fanatical, vain, haughty and arrogant central Asian savage Mohamedan hordes of Tartar, Mongol, Turkish, Iranian and Afghan tribes. This time it was of no avail. These diabolically fiendish, bigoted fanatics could not be so easily humanised before their wild savage blood became slowly modified in the intercourse for centuries with the Hindus. So India lay prostrate, faint, bleeding at her conpueror's feet. After nearly a millennium she is giving signs of her revival.

From this it is evident that the population of India is

mixed as in every other country and its nationality is the synthesis of all races. It is the source of racial vitality. Inbreeding is a degenerative process. It is distinctly seen among the infusoria. In a few generations through fission which is its natural process of reproduction, it degenerates into senile decadence; but sexul conjugation speedily rejuvenates it. So with the races. As the contact of the positive and the negative currents of electricity generate lightning flash, so in the amphimixis of racial germ-plasms, genius is born. America is the melting pot of all races and its tremendous nervous vitality and initiative is well recognised. The splendour of the Babylonian civilisation was due to the mixture of the Akkadian and Sumerian races with the Semites. The brilliancy of the Greek intellect was due to the mixing of the Aryans with the Pelasgians. Even so with the modern races.

The English people is composed of the ethnic stocks of he Iberians, Celts, Jutes, Angles, Saxons, Danes, Normans and Nordic races.

In the blood of the French course the following ethnic elements :—Aquitanians, Iberians, Silures, Basques, Vascons, Suets, Libici, Srdonians, Conqueranians, Bituriges, Arvernes, Pictons, Cambolectes, Ageniseses, Andegades, Carnutes, Venets, Curiosolites, Osismiens, Abricantuens, Auleries, Lexoviens, Lingones, Helvotes, Vandales, Alains, Taifales, Agathyrses, Ruthenes, Poles, Venedes, Belgians, Cimbres, Visigoths, Francs, Burgondes, Saxons, Germans, Sueves, Phœnicians, Saracens, Jews, Etruscans, Pelasgians, Avares, Cumans, Etc.

Italian population is no less mixed. The autochthonous population Sicanes and Liburnes were pure negritoes. And

they were conquered by Pelasgians with their numerons subdivisions, the Messapinians, the Peucetion, Oinotres, the Opisques, the Iapyges and the Apulian. The Etruscans who inhabited the central part of Italy were in every probability the northern branch of the Pelasgians. Then came the Longobards, the Byzantins, the Gauls, the Egyptians, the Greeks, the Goths, Vandals, Scythians, the Germans, Spainards, the Normans. the Jews, the Slavs, the Saracens, etc.

The provincial types of the Indian Population can be classified as the following if that designation is permissible. For if the Punjabi is more robust, tall, martial and has fairer complexion than the Marhatta or the Bengalee, it can be explained on the principle that living in an arid, salubrious climate, where the struggle for existence is very severe, it has naturally developed characteristics of vigour, and resistance. And though she has borne the brunt of the invader's first onrush yet she is more or less Indo-Aryan in type. The reason may be that the majority of the invaders have been Aryans and others could bring very few women with them over difficult mountain passes and desert waste to perpetuate a type and they were simply submerged in the masses. The Punjabi group comprises of the Cashmerians, Rajputs and Jats. Some anthropologists believe that the Jats, if not the Rajputs, have Scythian blood in them, for they are of predatory instinct and of ferocious nature. But they possess the distinct Aryan features, dolicho-cephalic head, tall delicate frame, leptorrhine nose, fine oval face, especially in the upper stratum, where there has not been admixture of the Bhil blood.

The Hindustanee type is met in the Jamuna-Gangetic

basin (madhya-desa), Oudh, and Behar (Maghadha). It is a mixture of the second class of Aryans, that migrated from Mesopotamia, settled and developed in the Madhya-desa powerful kingdoms and extended the Aryan power and influence in the South (Daskhina-desa) under the leadership of the Bharata clan, with the autochthonous Dravidians. The Aryan blood predominates in the upper classes and is very much attenuated in the lower.

The Gujrati is a mixture of the Aryan that landed at Dvaravati (in Kathiwar) with the Dravidian and slightly with the Scythian. We know that Toramana (490-515 A. D.) son of Lakhan Udayaditya, the Scythian chief (the Chinese name Laelih) who wrested the northern Indian kingdom from the Kushans and established his capital at Sakala, founded a powerful kingdom in Gujrat and Rajputana. In Sind there is more Dravidian blood and a slight touch of the sea-faring Semitic Arab.

The Marhattas, the Kunvis and the Kurgs are regarded as Scytho-Dravidian. We know very little how the Scythian wave of invasion spent itself. Perhaps as marauding horsemen they spread their seed broadcast, but was before long engulfed in the immensity of the population without leaving any distinct trace. Their guerilla-fighting spirit, contending nature, sourish temper, obstinacy and self-sufficient egoism are regarded by some as sure indications of their Scythian origin. But these are simply psychological traits, quite independent of any racial descent. And the Marhattas (Maharastras) are devoted Hindus, earnest Sanscrit scholars and have a passionate love of the country, which speaks of a deeper Aryan tradition, if not of the blood.

The Dravida (the southern India) is chiefly inhabited

by the Dravidian population, having a slight strain of Aryan blood in the upper classes and in the lower of the aboriginal population, known as Veddas in Ceylon, Pariahs in the south, Kols, Bhils, Santals and various other designations in different parts of the country.

Bengal has perhaps the most mixed population of any other part of India. The upper classes, Brahmins, Kayasthas and Baidyas are principally Dravidian with Mongoloid (Tibeto-Burman) admixture and with slight trace of the Aryan blood in them. The lower stratum of the society consists of the admixture of the Dravidian with the Kolarian.

In this wonderful variety and richness lies the tenacious vitality and the unique power of assimilation and resistance to foreign encroachment and the historic continuity of her consciousness. If the Rajputs and the Marhattas are really of Scythian descent, nothing is more needed to express its triumphant mechanism. For they have been and are the most staunch and militant Hindus. In the darkest period of India's history, threatened by an ever-victorious, terrible, cruel and remorseless foe of savage Central Asian hordes, against odds, they fought and fought bravely and never gave up to fight for the integrity of their faith and the liberty of their country.

From time immemorial the whole of Bharata-Bharsa including Tambrapana (Ceylon) has been regarded as a sacred land, undivided and indivisible and it has been always a geographic, ethnic, economic, religio-social entity. The Hindu kingdoms might have fought each other for supremacy, but they never wanted to fight for anything outside the country, nor did they confine

their subjects to the compressed limitation of their states, or fostered narrow provincial patriotism. The interest of the whole of India has been the special concern of all Hindu legislators, prophets and reformers, and not only a particular section of it. The heart of India has ever been vibrant to the achievement and success of any of its component parts and has rejoiced and prided it as its own. The intellectual centres like Banarasi, Pataliputra, Champak, Nalanda, Takshasila, Ujjani attracted the students alike from every part of India. The Hindu religion moreover prescribed pilgrimages to every part of India as a system of general education and love of the land. India to them was the living goddess-mother; her head crowned by the majestic tiara of the Himalayan silvery crest; her feet washed by the limpid waters of the ocean; she extends her arms over the whole continent as a blessing for her children.

The Vayu Purana (104. 79-82) compares the country as a god:—"He (Vyasa) found Mathura, where Bhagaban Hari himself incarnated in their lotus-like hearts; Kasi resembling Maya (illusion) in the receptacle between the eye-brows; Kanchi in the organ of generation; Avanti in the navel; Dvarika in the throat; Pryaga in the chin; the rivers Ganga and Jamuna on their left and right; the Sarasvati herself in the middle; Gaya in the face; the good place Praphosa between the jaw and the neck; the hermitage of Badari in the the aperture in the crown of the head; the Pithas Pandu-Vardhana and Nepala in the two eyes; the Pitha called Pura-Nagari on the forehead; Mathura Pitha in the neck; Kanchi Pitha in the loin; Jalhendu Pitha

on the breast; Bhrigu Pitha in the ear; and Auddhyu in the nostril. Brahma was the aperture of the crown of the head, Siva in the parting of the hair, Sakti in the end of the tongue, Vishnu in the heart, Surya in the eyes and Buddha was attached to the shadow."

III.

MYTHS.

According to the Sumerian legend, in the beginning of time, a watery chaos alone existed, Mummu Tiamat, *the chaos of the deep*. Out of this primeval chaos, first sprung up the divinities Lakhmu and Lakhamu, the meaning of which is not yet understood. Then appeared An-sar and Ki sar, the upper and the lower firmament. Then came Anu, a solar deity who later became the god of the entire heaven. Enlil starting as a storm-god, became later god of the earth. Ea became the god of the *watery deep* and the aquatic element in general. These three gods, representing the heaven, the earth and the water ruled the universe and were supreme over the lower gods and spirits known as Annunaki and Igigi. They appointed Marra-Dugga or Merodach (Marduk) the sun-god, the first-born of Ea, to bring order out of chaos and transferred to him their right of universal rule. It seems that Marduk was a late comer and re-placed the ancient gods. However as the legend goes, Marduk the god of light fought with the monster Tiamat who ruled over chaos and darkness and slew him after a heroic battle. Out of his skin the visible heaven was made for the habitation of Anu, Enlil and Ea. And under the lordship of Ea the rough sea became law-abiding and navigation became possible. In the heavens sumptuous mansions were built for the Sun, the moon, stars and planets so that they become bound by fixed laws and thus regulate the calendar and determine the year. Then vegetables, birds, fish,

reptiles and animals were created and lastly man to rule over them all. And out of the rib of man, woman was made to keep him content.

Though no temptation-story has yet been found among the Babylonian tablets, yet a Babylonian cylinder has been brought to light, in which persons are pictured under a serpent near by.* And the Sumerians represented Tiamat, as a monstrous dragon, the serpent of the sea, the serpent of darkness, the wicked serpent and the mighty and strong serpent.†

The deluge story is very ancient. The gods brought it about to punish man for his unthankfulness to the gods. Their anger was appeased at the appeal of the mother-goddess who was sorely grieved at the loss of her children. The older tablets are partially damaged. But the entire eleventh tablet of the Gilgamesh epic is devoted to it and the composition of which is not less old than 4000 years, and it follows thus :—

"Gilgamesh speaks to him, to Utnapishtim, the far removed : 'I gaze at thee, Utnapshtim ! Thy appearance is not different. As I am, so art thou. Thou art completely ready for the fray.....thou hast placed upon thee. (Tell me) how thou didst enter into the assembly of the gods and secure life'."

"I will reveal to thee, Gilgamesh, a secret story, and the decision of the gods I will tell thee. The city Shuruppak, a city thou knowest, (the one that) lies on the Euphrates, that city was old, and the gods thereof induced the great gods to bring a cyclone over it ; it

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* Paul Carus : The history of the Devil, P. 35.

† Ibid. P. 34.

was planned (?) by their father Anu, (by) their counsellor, the warrior Enlil, (by) their herald Ninib, (by) their leader Rn-nugi. The lord of the brilliant vision, Ea was with them."

He repeated their decision to the reed-hut, where Utnapishtim dwelt. The primitive civilisation did not advance yet farther than reed-cottages.

'Reed-hut, reed-hut, wall, wall, Reed hut hear! Wall, give ear! O man of Shuruppak, son of Ubara Tutu, Break up the house, build a ship, Abandon your property, seek life! Throw aside your possession and preserve life! Bring into the ship seed of all living things! The ship that thou shalt built, let its dimensions be measured, (so that) its breadth and length be made to correspond. On a level with the deep, provide it with a covering (deck)."

"I understood and spoke to Ea, my lord: (The command) of my lord which thou hast commanded and I have understood (it), I will carry out. (But what) shall I answer the city, the people and the elders? Ea opened his mouth and spoke: Spoke to me his servant. '(As answer) thus speak to them: (Know that) Enlil has conceived hatred towards me, so that I can no longer dwell (in your city). (On) Enlil's territory I dare no longer set my face. Therefore I go to the *deep* to dwell with Ea, my lord. (Catch of) bird, catch of fish, and.....rich crops.".....
.....Undecipherably damaged here.....

"On the fifth day, I designed its outline. According to the plan (?), the walls were to be ten Gar high. Correspondingly, ten Gar (120 cubits) the measure of its width. I determined upon its shape (and) drew it. I

weighted it six-fold. I divided (the superstructure ?) into seven parts. Its interior I divided into nine parts. Water-plugs I constructed in the interior. I selected a pole and added accessories. Six Sar of asphalt I poured on the outer wall. Three Sar of pitch (I poured) on the inner wall. Three Sar the workmen carried away in their baskets. Of oil, the boatmen secreted two Sar of oil."

"All that I had loaded on her. All that I had of silver I loaded on her. All that I had of gold I loaded on her. All that I had of living beings I loaded on her. I brought to the ship all my family and household ; Cattle of the field, beasts of the field, all the workmen I brought on board."

"Shamash had fixed me time, 'when the rulers of darkness (?) at evening time were to cause a terrific rain-storm step into the ship and close the door !' The fixed time approached, when the rulers of darkness (?) at evening time to cause a terrific rain-storm. I recognised the symptoms of (such) a day, a day for the appearance of which I was in terror. I entered the ship and closed the door. To steer the ship, to Puzur-Kurgal, the boat-man, I entrusted the palace (boat) together its cargo. As morning dawned, there arose on the firmament of heaven black clouds, Adad thundered therein ; Nabu and Lugal marched in advance, Ira tears out the ship's pole. Ninib marches commanding the attack, the Anunnali lift torches, illuminating the land with their sheen, Adad's roar reaches to heaven, all light is changed into darkness.

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One day the hurricane raged.....storming furiously..... coming like combat over men. Brother sees not brother. Those in heaven do not know one another. The gods

are terrified at the cyclone, they flee and mount to the heaven of Anu; the gods crouch like dogs in an enclosure. Ishtar cries aloud like one in birth throes, the mistress of the gods howls aloud: 'That day be turned to clay (cursed with destruction) when I in the assembly of the gods decreed evil; That I should have decreed evil in the assembly of the gods! For the destruction of my people should have ordered a combat! Did I bring forth my people, that like fish they should fill the sea?' All the Anunnaki weep with her. The gods sit down, depressed and weeping. Their lips are closed.....Six days and nights the storm, cyclone (and) hurricane continued to sweep over the land. When the seventh day approached, the hurricane and cyclone ceased the combat, after having fought like warriors (?). The sea grew quiet, the evil storm abated, the cyclone was restrained. I looked at the day and the roar had quieted down. And all mankind had turned to clay. Like an enclosure..... had become. I opened a window and light fell on my face, I bowed down and sat down and wept, tears flowed over my face. I looked in all directions of the sea. At a distance of twelve an island appeared. At mount Nisir the ship stood still. Mount Nisir took hold of the ship so that it could not move. One day, two days, Mount Nisir (salvation) took hold of the ship, etc. Three days, four days, Mount Nisir took hold of the ship, etc. Five days, six days, Mount Nisir, etc. When the seventh day arrived, I sent forth a dove letting it free. The dove went hither and thither; ont finding a resting place, it came back. I sent forth a raven, letting it free. The raven went and saw the decrease of the waters. It ate, croaked (?) but did not

turn back. Then I let all out to the four regions and brought an offering I brought a sacrifice on the mountain top. Seven and seven *adagur* jars I arranged. Beneath them I strewed reeds, cedar wood and myrtle. The gods smelled the odor. The gods smelled the sweet odor. The gods like the flies gathered around the sacrifice.

As soon as the mistress of the gods arrived, she raised on high the large necklace (?) which Anu had made according to his art. 'Ye gods, as surely as will not forget these precious stones at my neck, so I will remember these days—never to forget them. Let the gods come to the sacrifice, but let Enlil not come to the sacrifice. Because without reflection he brought on the cyclone, and decreed destruction for my people.' As soon as Enlil arrived, he saw the ship and was enraged. Filled with anger at Igigi. 'Who now has escaped with life? No man was to survive this destruction!' Ninib opened his mouth and spoke, spoke to the warrior Enlil, 'Who except Ea can plan any affair? Ea indeed knows every order.' Ea opened his mouth and spoke, spoke to the warrior Enlil: 'Thou art the leader (and) warrior of the gods. But why didst thou without reflection, bring on the cyclone? On the sinner impose his sin, on the evil-doer impose his evil, but be merciful not to root out completely, be considerate not (to destroy altogether)! Instead of bringing on a cyclone, lions might have come and diminished mankind. Instead of bringing on a cyclone, jackals might have come and diminished mankind. Instead of bringing on a cyclone, famine might have come and overwhelmed the land. Instead of bringing on a cyclone, Ira (pestilence) might have come and destroyed the land. I did not reveal the

oracle of the great gods, I sent Atrakhasis a dream and he understood the oracle of the god. Now take counsel for him.'

Enlil mounted the ship, took hold of my hand and led me up, led me up and caused my wife to kneel at my side, touched our foreheads, stepped between us (and) blessed us. 'Hitherto Utnapishtim was a man; Now Utnapishtim and his wife shall be on level with the gods. Utnapishtim shall dwell in the distance, at the confluence of streams.' Then they took me and settled me at the confluence of streams."*

It is true that man living in the post-glacial period was menaced by the overwhelming floods and so from the race-memory, it has entered into the legend of almost all races in one from or other. However it is evident that the Biblical narration of creation and deluge is almost a literal translation from the Sumerian legend. The Hindu version seems to be from the same origin. The earliest version of it is found in the Satyapatha Brahmana, where it is related that Manu, son of Vivasvat, found when bathing, a small fish which begged to be tended and in return promised to save him in the coming flood. The fish grew and grew and became so large that it had to be carried to the sea, where it revealed to Manu the time of the flood and bade him build a ship for his saftey. When the flood came, Manu went on board. The grateful fish towed the ship in tempestuous sea to the summit of the northern mountain, where it bade Manu to bind the ship to a tree. When the

* Rendered into English by Morris Jastrow in his *Civilisation of Babylonia and Assyria*, p. 445-452 from the German translation, Ungnad-Grassman : Das Gilgamesh-Epos.

water retreated, he descended the mountain and made a sacrifice to the gods. In a year, the goddess of fertility appeared and thus commenced the human race. In the Mahabharata, the gap is filled. Manu embarks with seven rishis and takes with him all kinds of seed Manu also seems to be a generic name. Menes was the founder of the Egyptian and Cretan dynasties. Accordrng to Tacitus the Old Teutons had a deity as Manus, from which *Manusha* was derived standing latter for man. In Sanscrit both *Manava* and *Manushya* are derived from Manu and standing for mankind.

Enlil was virtually a storm-god. Enlil in Sumerian means "lord of the storm." His temple at Nippur is known as E-Kur, "Mountain House" and he is often addressed as the *great mountain.* Perhaps he was brought by the Ammorites ousting Ninib who became the *son of Enlil, offspring of Ekur*, or the storm came from the mountain region. And may be he stood for the river-embankments, which were essential for the agricultural development of the low-lands. There are many hymns ascribed to him, denoting his characteristics as the following :—

"Lord of the lands,
Lord of the true word,
Enlil, father of Sumer,
Shepherd of the dark-headed people,
Seeing through his own bower.
Strong guide of (his) people,
Causing multitude to dwell together."

"The word which rages in the heavens above,
The word (thunder ?) which causes the earth below to quake
The word which strikes terror among the Anunnaki."

"Beyond the seer, beyond the diviner,
An onrushing storm which none can oppose,
Raging in the heavens above, causing the earth below
Tearing mother from daughter to quake, like a
buru-reed."

"It overwhelms the marshes in full verdure,
It overflows the harvest in season,
A flood tearing away the dams,
It uproots the huge *Mesu* trees,
Reducing all things to submission."

"O Enlil, Councillor, who can grasp thy power?
Endowed with strength, lord of the harvest lands!
Created in the mountains, lord of the grain fields!
Ruler of great strength, father Enlil!
The powerful chief of the gods art thou,
The great creator and sustainer of life!" *

Ninib was perhaps the original patron deity of Nippur, for Nippur is described as "the beloved city of Ninib." However he soon absorbs the quality of his father though originally a solar deity. He is addressed as follows :—

"In the thunderous rolling of thy chariot,
Heaven and earth quake as thou advancest".†

"O Ninib, mighty god, warrior, ruler of Anunnaki, controller of the Igigi, Judge of all things, who shuts off the door of darkness, who dissipates the obscurity (the function of sun-god), who renders decisions for mankind in their settlements, Resplendent lord, bestowing power

* Reisner: Sumerisch-Babylonische Hymnen, No. VII. Cuneiform Texts, XV. Pl. II.

† Rawlinson, ii, pl. 19.

on the land, throw his decision, who seizes the demon Ti'u and drives him back to his place. Merciful one, granting life, bringing the dead to life, who controls right and justice, destroying evil (?) Whose active weapon destroys all enemies."*

As a solar deity, Ninib was very dominant. For he absorbed Ningirsu, the patron solar-god of Lagash and his consort Bau also became identified with Gula, the consort of Ninib. But as the French proverb goes that the appetite grows with eating, so Ninib overtakes one solar deity after another, Zamama of Kish and Urash of Dilbat. But the Akkadian Shamash of Sippar proved too strong for him. And his temple E-Babbar (resplendent house) remained very popular for centuries. He is addressed thus :—

"O lord, illuminator of the darkness, opening the face (of heaven ?)
Merciful god, raising the humble, protecting the weak ;
For thy light the great gods wait,
All the Anunnaki look for thy appearace,
All tongues dost thou direct as a single being.
With raised heads they look expectantly towards the sunlight ;
Thou art the light for the remotest bound of heaven,
The banner for the wide earth art thou ;
All mankind look upon thee with joy."†

"O Shamash, on thy entrance into the heavens,
May the resplendent bolts of the heaven greet thee,

* Jensen : Kosmologie der Babylonier, P. 470. Ninib destroys the demons of disease, and in that sense he brings the dead to life.

† Rawlinson, IV. Pl. 19.

May the gates of the heaven bless thee,
May Meshara (Righteousness) thy beloved messenger, direct thee!
Over E-Babbar, the seat of thy rule, let thy supremacy shine,
May Ah thy beloved consort, step joyfully before thee,
May thy heart be appeased,
May the table of thy divinity be spread,
O Shamash, powerful warrior, be thou glorified!
O lord of E-Babbar, pass on, thy course be rightly directed!
Take thy way, on a firm path move along!
O Shamash, judge of the world, giver of all decisions art thou."*

But the sun-god Marduk, the patron-deity of Babylon, with the growth of the great imperial city, becomes so powerful that he not only absorbs the attributes of other solar gods, but of all gods. He takes the epithet of *Bel matati* (lord of all lands) and became later known as Bel, Belu or Baal which simply means lord. He is the *wise one, first-born Ea, creator of all humanity.* His temple is the E-sagila (the lofty house) to which on new year's day all other gods came in procession to pay him homage. He is addressed as follows :—

"Mighty lord of gods, strong Marduk, Counsellor, beloved of Ea, of all pervading command, Before his mighty command, the great Igigi bow; (In thy) holy chamber the Anunnaki bow before thee; Lord of all below, merciful one, producer of all fertility, Guardian of

* Abel—Winckler: Keilschrift=texte zum Gebrauch bei Vorlesungen P. 59.

sacrifices for the gods, founder of cities, Guide of the sources, opener of fountains,Lord of lands, king of heaven and earth, granting prosperity, God without whom in the depth the fate of mankind is not determined. Thou lookest on the inhabitants of the wicked and destroyest their power. What god in heaven or earth is like to thee ? Supreme art thou over all gods ; Among the gods thy counsel prevails ; Thou art superior to Ea, the father who produced thee."*

Marduk even absorbs the thunder and the storm god Adad or Raman and uses his lightning fork, as an instrument (trident) in his conflict with Tiamat.†

"Who can escape thy gaze ?
Thy word (the roar of thy thunder) is a great
net stretching over heaven and earth ;
It encloses the sea and the sea is stirred up,
It encloses the marsh and the marsh groans,
It encloses the billows of the Euphrates.
The word of Marduk troubles the river bed (?)
Lord, thou art supreme, who is like unto thee ?
Marduk, among all the great gods thou art supreme."‡

The following hymn illustrates the power and monotheistic conception centered in Marduk, as he began to absorb the traits of other gods :—

Ea is the Marduk of Canals ;
Ninib is the Marduk of strength ;

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* Scheil : Une Saison de fouilless a Sippar, P. 97.

† Layard : Monuments of Nineveh. Vol. II. Pl. 5. Morris Jastrow : Aspects of religious belief and practice in Babylonia and Assyria, P. 92. Pl. 15, Fig. I.

‡ Morris Jastrow : The Civilisation of Babylonia and Assyria, P. 214.

Nergel is the Marduk of war ;
Zamana is the Marduk of battle ;
Enlil is the Marduk of sovereignty and control ;
Nebo is the Marduk of possession ;
Sin is the Marduk of illumination of night ;
Shamsh is the Marduk of judgments ;
Adad is the Marduk of rain ;
Tishpak is the Marduk of host ;
Gal is the Marduk of strength ;
Shukamunu is the Marduk of the harvest."*

The courts were generally located in the temples of Marduk, for he absorbed the function of the god Shamash and a hymn to him makes him the heavenly judge :—

The progeny of those who deal unjustly will not prosper.
What their mouth utters in thy presence
Thou wilt destroy, what issues from their mouth thou wilt dissipate
Thou knowest their transgressions, the plan of the wicked thou rejectest.
All whoever they be are in thy care ;
Thou directest their suit, those imprisoned thou dost release ;
Thou hearest, O Shamash, petition, prayer and imploration.
He who takes no bribe, who cares for the oppressed
Is favoured by Shamash—his life shall be prolonged.†

Nabu or Nebo was regarded as the son of Marduk. But there are reasons to believe that he was a rival god of

* Cuneiform Texts, xxiv, Pl. 50. Tishpak and Gal are foreign Elamite deities and Shukamunu, Cassite).

† Morris Jastrow : Aspects of religious belief in Babylonia, P. 112.

Marduk for in the inscription of Adad-Nirari IV. (810-782 B.C.), we find "Trust in Nebo ! Trust in no other god !" However Nebo was regarded as the Secretary of the gods and who, at the time of the New Year's assembly of the pantheon when the fates of the individuals are decided, records the decisions of the gods. In popular estimation he was regarded as the god of learning and wisdom and he had always in his hand the stylus of the scribe.

The moon-god Sin or En-Zu (the lord of knowledge) was very popular at Ur and Harran. Though he was regarded as the lord of knowledge like Nebo, yet his knowledge was only confined to reading the signs in the heavens, that is in the astrological and astronomical lore. As the moon-god Sin was often symbolised by the cresent—the rising moon, and the crescent also appears like a bark to the primitive mind, in old invocations he is pictured as sailing across the heavens in a bark :—

"In the respledent bark of heaven, o self-appointed ruler,
Father Nannar, lord of Ur,
Father Nannar, lord of E-gishshirgal (Sin's temple).
Father Nannar, lord of Namrasit (rising in light),
Lord Nannar, first-born son of Enlil,
As thou sailest along, as thou sailest along,
In the presence of thy father, in the presence of Enlil, thou art ruler:
Eather Nannar, thou art ruler, thou art leader,
In the bark rising through the heavens, thou art ruller."*

Sin also forms a triad with Shamash and Adad,

* Reisner : Sumerisch=Babylonische Humnen, No. 38.

symbolising the chief manifestations of nature, the sun, the source of light and heat and on which depends the vegetable growth, the moon, the lord of the starry heaven and the astral bodies who decides the fate of every one and the storm whose accompaniments, rain and floods, are favourable to agriculture, while thunder and earthquake are destructive. This was based on the old trinity Anu, Enlil and Ea, representing heaven, earth and water. The element fire was also worshipped as the god Nusku and both water and fire were regarded as purifying and destructive of disease demons. The fire-god Nusku was addressed thus :—

"Nusku, great god, prince of the great gods,
Guardian of the offerings of Igigi,
Founder of cities, renewer of sanctuaries,
Resplendent deity, whose command is supreme,
Messenger of Anu, carrying out the decrees of Enlil,
Obedient to Enlil prince, leader of Igigi,
Mighty in battle, whose attack is powerful,
Nusku, consumer, conqueror of enemies,
Without thee no sacrificial meal is given in the temple,
Without thee, the great gods do not inhale any sweet smelling offering,
Without thee Shamash, the judge does not make a decision."*

Ashur, the patron deity of the Assyrians received the attributes of other Babylonian gods like Marduk with the extension of the Assyrian power, as is illustrated by the following invocation inscribed by Sennacherib (705—681 B. C.) :—

* Mukla, Incantation Ritual Tablet V,

"To Ashur, the king of the totality of the gods, his own creation, father of the gods,
Whose power is unfolded in the deep, king of heaven and earth,
Lord of all gods, controller of the Igigi and Anunnaki,
Creator of the heaven of Anu and of the world below, creator of mankind,
Dwelling in the resplendent heavens, Enlil of the gods, determiner of fates,
Dwelling in E-sharra in Ashur for his lord,
Sennacherib, king of Assyria has made an image of Ashur."*

Of course it goes without saying that as every man had a wife or as the popular saying goes that every lad has his lassie, so every god had his consort, though they often lacked individual distinction and shone only in the reflected glory of their husbands. Anu had as his consort Antum (simply feminine derivative of Anu in Sumerian language); Ea had Dam-kina (the faithful spouse); Enlil, Ninlil (the lady of the storm); Ninib, Gula (the great one); Ningirsu, Bau; Nergal, Laz; Shamash, Ah; Marduk, Sarpanit (the great lady); Adad, Shala (the lady); Nebo, Tashmit (obedience) and Ashur's consort was addressed differently as Ninlil, Belit or Ishtar. She appears under various names, such as Nana, Innanna, Nina, Anunit, Nini, Irnini. But all these names mean the same thing *the lady* as the Akkadian Belit or the Assyrian Ishtar, the feminine of Ashur, meaning *leader*. The name Ishtar is really a generic term for goddess, for we find its plural *ishtarati* meaning goddesses. Ishtar is the only

* Craig: Assyrian and Babylonian religious Texts' I. Pl. 83.

goddess whether as the consort of all-powerful Marduk of the south, or Ashur of the north is not a mere shadow of her husband. In all the great centres Ishtar had her magnificent temples, bearing such designations as E-anna (heavenly house), at Erech, E-makh (great house) in Babylon, E-mash-mash (house of offering) in Nineveh. She was called *light of heaven and earth, the shining torch of heaven* perhaps because she was astrologically identified with the planet Venus. However from the beginning of the Babylonian conception of religion, she has been always regarded as the great mother-goddess and so worshipped everywhere in one form or the other. As Anunit, the consort of Anu, she symbolised the goddess-earth. The heavenly father Anu embraced her and deposited in her bosom the seed to be fertilized and fecundated and life sprang up in luxuriant growth of vegetation. By her intimacy with the water-god Ea, she presides over streams and canals. Becoming the mistress of the storm-god Enlil, she is a *controller of the clouds, a raging storm devastating heaven and earth,* whose voice *thunders over all the universe.* Being the consort of Marduk in turn she receives the characteristics of the great patron deity of Babylon. In an ancient hymn attached to a song of praise to Hammurabi (2200 B. C.) Ishtar is described as a deity who furnishes aid *in war and battle.* In many votive offerings, she is called *'the warlike Ishtar, the martial lady of victory, girded for the fray.'* Especially in association with the war-lord Ashur, reflecting the martial qualities of the Assyrians, she puts on a terrible sanguinary appearance with a quiver and an arrow. The following is a fine specimen of invocation of the great goddess :—

"I pray to thee, mistress of mistresses, goddess of godesses,
Ishtar, queen of all inhabitants, guide of mankind,
Irnini praised be thou, greatest among the Igigi
Powerful art thou, ruler art thou, exalted is thy name,
Thou art the light of heaven and earth, mighty daughter of Sin,
Thou directest the weapons, arrangest the battle array,
Thou givest commands, decked with the crown of rulership,
O lady, resplendent is thy greatness, supreme over all gods.
.....
Where is thy name not ? Where is thy command not ?
Where are images of thee not made ? Where are thy shrines not erected ?
Where art thou not great ? Where not supreme ?
Anu, Enlil and Ea have raised thee to mighty rulership among the gods,
Have raised thee aloft and exalted thy station among all the Igigi.
At the mention of thy name, heaven and earth quake,
The gods tremble, the Anunnaki quake.
To thy awe-inspiring name mankind gives heed,
Great and exalted art thou !
All dark-headed ones, living beings, mankind pay homage to thy pewer."*

In sculpture the most famous representation of Ishtar as the goddess of war is carved on a rock in the mountain of Batir (Zagros range), erected by Anu-banini, king of Lulubu, in commemoration of his victories and he represents himself putting his one foot on a prostrate

* King : Seven tablets of creation ; Vol. P. 222.

enemy, for the blessing of the goddess Inninna who armed with armour and helmet, bristling with quiver and arrows, puts her one foot on the fallen foe, drags another with her left hand by a chain hooked to the nose and extends her right hand as a blessing to the king.* Ishtar as the mother-goddess, holding with her right hand in her bosom a baby who sucks her right breast while she places her left hand foldingly on the other breast has been found at Telloh and now in the Louvre (Catalogue, P. 356) and a similar figure has been obtained in Babylon.† Ishatar as the goddess of love, representing a nude figure with the accentuation of the feminine charms have been found throughout Mesopotamia and many of them are now in the Louvre and she also frequently appears so on seal-cylinders.‡

However it was not as a terrible grim Amazon (warrior-goddess) or as gracious mother-goddess, she was so popular, but as the charming and seductive goddess of love and generation. She was the passional force and the fertilising principle of nature. Passion, the bio-tropic impulse, is the motive and love (sexual union) is the cause of all origin and growth of life. So she was called *kadishtu* (the sacred prostitute) and her priestesses and votaries practised it in her honour, as Herodotus (I. 199)

* De-Morgan : Misson Scientifique in Perse, Vol. IV. Pl 10. De Morgan et Schi I : Le Recueil de Travaux, Vol. XII. P. 100-106. Morris Jastrow : The civilisation of Babylonia and Assyria, Pl. 29.

† Heuzey : Figurines Antiques, Pl. 2 : De Sarzec - Decouvertes, P. 254 ; M. Jastrow : cit.

‡ Heuzey : Origines Orientales de l' Art, P. II ; Ward : Seal Cylinders of Western Asia, Chap. 26.

mentions it as the Babylonian custom which prevailed as late as the third century B. C.

All the divinities of the Babylonian pantheon had their animal carriers. It is graphically inscribed in a rock-relief at Malatia in the Anti-Taurus range, showing seven deities mounted on animals that represent their symbols. The head of the procession is formed by Ashur on two animals one of which is the dragon, transferred to him from Enlil and Marduk, followed by his consort Ishtar of Neneveh on the lion, Sin the moon-god on the winged bull, Enlil or Marduk on the dragon, Shamash on a horse, Adad on a bull, Adad on a bull and holding the lightning fork in his hand and lastly another Ishtar on a lion, presumably, the Ishatar of Arbela.* However the god Ashur is invariably followed by bulls and occasionally he holds in his hand a coiled serpent which was transferred to him from Marduk.†

The Sumerians divided the year into twelve months and each month was assigned to some god or gods. Thus the first month was dedicated to Anu and Enlil, the second to Ea, the third to Sin, the fourth to Ninib, the fifth to Ningishzida, the sixth to Ishtar, the seventh to Shamash, the eighth to Marduk, the ninth to Negal, the tenth to Nebo, the eleventh to Adad, the twelfth to Sibiti (Ashur).

Temple edifice was always located in Chaldea in the centre of the city, near the palace. It was the pulsating

* Layard: Monuments of Nineveh, Vol. I. Pl. 65; Place: Ninve et l'Assrie,, Pl. 45; Luschan: Ausgrabungen in Sendschirli. P. 23; M. Jastrow: Aspects of religious belief and practice in Babylonia and Assyria, Pl. 17.

† Botta et Fland in: Les Monuments de Ninive, Vol. II. Pl. 158.

centre of public life. Here round the enclosure which separated the inner sanctuary containing the deity on a raised pedestal, to which only the priests and the king had access and the courtyard thronged by the lay worshippers and pilgrims, who could only peep standing at the sacred image through the opening of the gate, here they laid their offerings, made their prayers and received the blessings of the priests. Grouped around it were the private apartments of the Barus (priests), the school, the quarters for apprentices, the tablet room (library), quarters for the tribunals, archive rooms, offices of the notaries and the scribes, workshop and booths for the manufacture of temple utensils, fabrics and votive offerings, store rooms for the various needs of this immense religious household, general office for the transaction of the temple business and the stalls for animals. The most striking feature of the temple structure was its Ziggurat (the mountain peak or stage tower). It consisted of several storeys, built one over the other, the upper storey in each case set back behind the lower in order to leave a terrace all around to provide space for the pilgrims to rest and to observe the panorama of the surrounding country and for the broad ascending stairs from storey to storey. Some had symmetrical stairs for ascent and descent. Some like the great temple at Ur had only three stages, others again seven—always one of the three sacred numbers, three corresponding to the divine triad; five to the five planets; seven to the five planets, the sun and the moon. On the top of it was the astronomical observatory and a small shrine of the deity which was accessible to all the pilgrims and its circumambulation was a necessary fulfilment of the pilgrimage. It was

regarded as the link between the heaven and the earth. It was the sacred mountain abode of the gods. The principal temples have been found by recent excavations in the following localities: "Abu Shahrain (Eridu); Mugheir (Ur); Senkera (Larsa); Warka (Erech); Tello (Eninnu); Birs Nimrud (Borsippa); Babil (Babylon); Nippur (Niffer); El Ohemir (Kish); Abu Happara (Sippara). Though of these Ziggurats, those at Warka, Nippur, and Tello are much older, the Temple of Borsippa at Birs Nimrud is in better preservation, having been restored by Nebuchadnezzar (604-561 B. C.). and may be taken as a typical example. The ground storey was 272 ft square and 45 ft high. The upper storeys or stages receded back, one behind the other so as to leave terrace and space for stairs all around. Although it is not possible to trace more than four storeys, it is known from a description on a cylinder found on the site that there were seven storeys, dedicated to the planets, each coloured with the special tint prescribed. The total height was about 160 ft and on the top was a shrine dedicated to the god Tebo."*

"The ornamentation of the edifice was chiefly by means of colour. The seven stages represented the seven spheres, in which moved, according to ancient Chaldean astronomy, the seven planets. To each planet, fancy, partly grounding itself on fact, had from of old assigned a peculiar tint or hue. The Sun (Shamash) was golden; the Moon (Sin or Nannar) silver; the distant Saturn (Adar), almost beyond the region of light, was black; Jupiter (Marduk) was orange; the fiery Mars (Nergal)

* Encyclo. Brit. II. P. 374.

was red; Venus (Ishtar) was pale yellow; Mercury (Nebo or Nabu whose shrine stood on the top stage), deep blue. The seven stages of the tower gave a visible embodiment to these fancies. The basement stage assigned to Saturn, was blackened by means of a coating of bitumen spread over the face of the masonry; the second stage assigned to Jupiter, obtained the appropriate orange colour by means of a facing of burnt bricks of that hue; the third stage, that of Mars, was made blood-red by the use of half-burnt bricks formed of bright red clay; the fourth stage assigned to the Sun, appears to have been actually covered with thin plates of gold; the fifth, the stage of Venus, received a pale yellow tint from the employment of bricks of that hue; the sixth, the sphere of Mercury, was given an azure tint by vitrifaction, the whole stage having been subjected to an intense heat after it was erected, whereby the bricks composing it were converted into a mass of blue slag; the seventh stage, that of the moon, was probably like the fourth, coated with actual plates of metal. Thus the building rose up in stripe of yellow, the yellow being followed by the blue. Above this the glowing silvery summit melted into the bright sheen of the sky."*

It was a very ancient custom in Sumer and which continued in force till the overthrow of the Babylonian empire, of devoting daughters of nobility to the temple service. Kings set the example. There were various

* Zenaide A. Ragozin: The Story of Chaldea, P. 282. The passage is quoted from George Rawlinson: Five Monarchies, Vol. III. P. 380.

classes for them, from the high priestesses to mere apprentices who kept the sanctuary in order and did other duties. They were generally designated as *entu* (woman of a deity). They could not enter into regular marriage. For they were *kadishtu* (holy woman or sacred prostitute) and they were dedicated to the service of the gods. However they should not be confounded with the *zermashitu* who were regular public prostitutes, though their calling was not so degraded as it is to-day.*

The most popular religious festival was the New year's celebration. It was regarded in Lagash as the union-time of the sun-god Ningirsu with his consort Bau, the goddess mother-earth, the male and the female principles of nature and from their congress issued the new life pulsating throughout the earth in the joyous spring time. And the people gave themselves up with utter abandon after their gods. In Babylon where Marduk absorbed so many complex traits of various gods and headed the pantheon, the ceremony was more elaborate and magnificent. The gods are brought in solemn procession to pay their homage in common with the populace to their over-lord enthroned in E-sagila. Nebu comes from Borsippa to bring tribute to his father and acts as the secretary of the gods in the *sacred chamber of fates* where for ten days the assembled gods decide the destiny of mankind for the coming year. But in Babylon as the spring time was the most arduous season for tilling and sowing and agriculture being the

* Frank : Studien zur Babylonischen Religion, P. 47-50 ; Dhorme : La fille de Nabonide, Revue d'Assriologie, Vol. XI. 105-117 ; Zimmern : Shurpu Series, Tablet V—VI, 145—147 ; M. Jastrow : The civilisation of Babylonia and Assyria, P. 308.

basic foundation of prosperity and well-being and ten days' abstention from labour being too much, the vernal festival was curtailed and it was renewed after the harvesting was done with general merriment, and it really became the national institution. These two festivals fell on the Vernal and the Autumnal Equinoxes which fall generally about March 21 and September 22. However though the harvest festival was really of popular rejoicing and merriment and in every sense of far more significance, the official calender year was calculated from the *vernal equinox*.*

Shiva is essentially a Dravidian god. He entered late into the Brahmanic pantheon, of which he is almost now the supreme head and has become Maha-deva (the great god.). In the Rig-veda there is no mention of Shiva, except Rudra the terrible thunder-god, the father of Marutas (storms). The name of Shiva with Rudra has been associated only in the Puranic Period. Of course in the Yajur he is represented as a destructive deity, god of thieves and criminals and in the Atharva he is transformed into Girisha, Tamra, Aruna, Babru from the dark-blue colour of the clouds; for the same reason he is also called Nilakantha (blue-necked), Kapardhin (long-haired), Pasūpati (protector of animals), Sankara (benefactor) and Shiva (the beneficent). In the Satyapatha Brahamana II. 6. 2. 9, there is an association of Rudra with Ambika in the following manner. "This is thy share, O Rudra, graciously accept it with thy sister Ambika." In the

* Weidner: Alter and Bedeutung der Babylonischen Astronomie und Astrallehre, P. 31; M. Jastrow: Religion Babyloniens und Assyriens, Vol. II. P. 462; M. Jastrow: The Civilisation of Babylonia and Assyria, P. 279.

same book (Satyapatha Brahmana 11. 4. 4. 6) one Daksa Parvati is also mentioned performing a great sacrifice. In the Kena Upanishad a learned female scholar Uma Himavati explains to Indra the nature of Brahman. In the Mandaka Upanishad of the Atharvaveda, Kali. Karali Manojava, Sulohita, Sudhumarvarna, Sphulangini and Biasvarupi are mentioned as the seven tongues of Agni, with which Rudra is identified. In the Puranas they become his consorts and Shiva becomes positively identified with Rudra and is also called Bala-natha (Lord Bal).

This only indicates the gradually encroaching influence of the Dasyus over the religious conception of the Arya conquerors. But the fundamental fact remains that Shiva was called Lord Bal, the epithet given to Marduk, that he had the same emblem trident (trisul); that he is symbolised by *phallus* (lingam) like Baal (Marduk); that like him he has a consort who has three aspects, the terrible war-goddess Kali, the mother-goddess Durga (Uma) and the goddess of love and generation Shakti; that Durga has the same animal carrier *lion* as Ishtar; that both of them had bull as their carrier; that the new year and the festivities commenced and continued for ten days at the same vernal and autumnal equinox; that the *gopuram* and ziggurat are very similar in structure and the *devadasis* (temple maids) remind one unmistakably of the Sumerian *entu* (the woman of the deity). All these cannot be mere coincidences. As we have tried to show that the Dravidian has racial affinity with the Sumero-Akkadian race or perhaps belonging to a kindred stock from which both have originated and inheriting alike the ancestral legends and myths and which they have developed to their full extent in their respective countries after their separation, this

marvellous alikeness of the relegious institutions leads to the same conclusion.

In the proto-Aryan legend, the vedic *Dyaush-pitar* (Haven, the father), the Avestan Ahura Mazda, the Greek Zeus-Pater and the Latin Dies-Piter, Jupiter and later Deus, is the same. The Dyaush is the luminous sky, the glistening ether. He is the architect of the universe (Visvakarman), the parent of all things (janita), the broad earth-goddess (Prithivi) being the mother of his children. The pair is called the Dyava-Prithivi, and with Dyaush is always associated the epithet Asura. The Zend-Avestan Ahura Mazda can be also easily traced as a sky-god. The words Avesta and Zend though of late origin can be the same Sanscrit words, *avasthita* or *avasthana* meaning settled, but used in Iran as settled text and Zend from Sanscrit *khandz* which is the name of a vedic metre, like Latin *scandere* derived perhaps from moving the feet while singing, as *pada* or *padapankti* is used for verse as the Greek *poes*. Ahura of course is the same as Asura and it is easily explained by the fact that the Iranians lacked the sibilant *s*. Mazda may be the abbreviation of Marduk or perhaps a variant of Sk. *medha* meaning sacrifice, knowledge or thinking. Thus Ahura Mazda might mean Ashura Marduk or lordly knowledge (omniscient lord'. However as a sky-god he is unmistakable. He lives in the celestial region of *vareua* which is vedic Varuna and "He is white, bright, seen afar and his body is the greatest and the fairest of all bodies ; he has the sun for his eye, the rivers above for his spouses, the fire of lightning for his son ; he wears the heaven as a star-spangled garment, he puts on the hard stone of heaven, he is the hardest of all. He dwells in the infinite luminous space and the infinite

luminous space is his place, his body. In the time of Herodotus the Persians while invoking Ahuramazda, the creator of earth and heaven, still knew who he was and called the whole vault of the sky Zeus, that is to say, called it the supreme god."* The only difference between the Vedic Dyaus and the Greek Zeus is that Zeus is rather too much of a profligate god and Ouranos (Varuna) is wedded to Gaia (Prithivi) instead of himself. But this difference is only apparent. If Demeter (Deva-matar) be but viewed as Gaia, the mother of all living beings, then Ouranos is but an imaginary creation as an embodiment of the visible sky.

Varuna is the covering of the heaven over the earth—the firmament. Varuna is derived from the Sk. root *vri*=to cover. He '*enfolds the heavens* and *measures out the earth and marks her uttermost bounds*,' (where the sky and the earth seem to meet). 'He covers the worlds as with a robe with all the creatures thereof and their dwellings ··He has encompassed the nights around; he has by his wisdom established the dawns; he visibly encompasses all things.' (R. V. VIII. 41). Besides the *two worlds* (rodasi, Heaven and Earth) which are invariably monopolised by the first divine couple, the intermediate space, the air-region (antariksha, the Avestan Vouru-Kasha) needed an embodied ruler. For that is an important middle kingdom. Here the celestial kine graze (the clouds gather); here the sun-god, the moon-god, the dawn-goddesses run their diurnal race on magnificent

* James Darmesteter: The Zend-Avesta, lviii; Yast XIII. 1. 2—4; Yasna LVIII. 8: LVII. 22; Bundahis, 1. 7; Herodotus, 1.131.

chariots with tireless, swift and brilliant steed. If anywhere god is needed, here he is of utmost importance. For he has to fix the tracks of the gods and keep away the fiends (Ahi and Vriti) from laying hand on the kine. There is nothing strange in regarding the clouds as the kine. The primitive Aryans, accustomed to cows, their favourite animal, and knowing that the milk coming from the udder of the cows not only quenches the thirst, but is also nourshing, regarded the rain falling from the sky as the milk of the celestial kine to quench the thirst and to feed the thirsty and hungry Earth. And as among themselves there was cattle-stealing, so they thought in the Antariksha too there must be cattle thieves whom they called enemies (Ahi, Vriti) and as all the clouds did not bring rain, so they naturally thought that those Cloud-kine must have been stolen by the fiends and they needed a god to chase the intruders away and to deliver the kine to bring rain. So Varuna was an important god and headed the pantheon, putting his father Dyaus (the bright, ethereal sky) into a subordinate position of oblivion.

"Varuna laid out the sun's path and sent the waters coursing to the sea. (VII. 87). The stars are up there, that are seen at night, where do they hide in the day? But Varuna's ordinances are immutable and the moon goes shining brightly through the night. (1.24). He who knows the path of the birds as they fly through the ample space and on the sea the ships". (1. 25).

The immutable ordinances of Varuna are the *Rita*, Lat. *Artus* the cosmic order that regulates the course of the sun, the moon and the stars, the alternation of day and night and seasons. From this high position, it is easily

imaginable that physical Varuna was slowly transformed into a spiritual god and a moral judge. There are numerous hymns to that effect. Vasistha prays : "Absolve us from the sins of our fathers and forgive those which we committed ourselves. Release Vasistha like a calf from the rope. It was not our will—it was seduction, an intoxicating drink, passion, dice and thoughtlessness." (VII. 86). Varuna has the epithet of Asura. And he is usually invoked with his brother Mitra (friend), sons of Aditi (the infinite space). Both of them often lose their identity and merge into one. But Mitra is the light of the day. With his bright rays of the morning he calls the people to do their duties with friendly greetings. While Varuna is the firmament of the night and the stars are his spies (1.25) to watch the deeds of the mortals when the heaven and the earth seem to be in closer touch. Thus Ouranos feeling the close touch of Gaia (earth) fell in love with her and Eros (Kama) was awakened in him. However the sun is the eye of both Mitra and Varuna.

The Iranians lost the original track of the Aryan myth of Varuna and they simply made the abode of Ahura Mazda in Varena (Ram Yast, II. 9) and there is hardly any difference in charateristics between the Vedic Varuna, Avestan Ahura Mazda and the Greek Ouranos. And the Iranians being more intolerant than the Aryas, they made Ahura Mazda the creator of Mithras, though they were twin-brothers originally (Mithra-Varuna) is clearly discernible through the Zend-Avesta. Ahura Mazda says : "Verily when I created Mithra, the lord of wide pastures (Voru-Kasha for the grazing of the celestial kine) O Spitama, I created him worthy of sacrifice, as

worth of prayer as myself, Ahura Mazda." Mihir Yast, 1. 1. And the entire Mihir Yast (praise of Mihir=the sun) is devoted to Mithra in which Mithra is regarded as the co-equal of Ahura, for we repeatedly find such utterances: "We sacrifice unto Mithra and Ahura, the two great imperishable holy gods." (XYXV. 145). But the Avestan Mithra was a more powerful and complex deity than the simple, benign, almost impersonal god like the Vedic Mithra. And he absorbed much of the martial qualities like Indra and he almost supplanted Ahura Mazda and virtually became the national deity.

Aditi (unbounded) is the infinity of space and eternity of time, or the visible endless expanse beyond the clouds and the sky, in contrast with *diti* (bound=the earth). Aditi became the mother of the bright sky gods, Varuna, Mitra and Aryaman and four other Adityas whose names are not definitely mentioned in the Rig-veda. Bhaga is found in some hymns as the fourth Aditya and the eighth Aditya was Martanda and being of shapeless form, differing from his brothers seven Adityas, he was thrown out by Aditi from the company of the gods. Martanda seems to resemble the Egyptian golden ape which has neither hands nor feet. The name of Daksha is also associated with Aditi and the gods are called *dakshapitar* (fathers of strength, the mighty). It is possible that Aditi sprang from Daksha or Daksha sprung from Aditi who also owed the existence to Bhu (Being) and the conclusion was reached that 'Non-being and being are in the higher heaven, in the birth-place of Daksha, in the lap of Aditi'. In the Avestan, Adityas are called seven Amesha-Spentas (Bountiful immortals) who dwell in the Garo-nmana (Endless Light)

with Ahura Mazda who is nothing but the Iranian Ashura Varuna as we have shown. However with the development and theological classification of Mazdeism Amesha-Spentas became mere deified abstractions, Vohu-mano (good thought : Vedic *sumati*), Asha Vahista (excellent holiness ; Vedic Rita), Khshathra vairya (perfect sovereignty : Sk. Kshatra-virya), Spenta Armaiti (divine piety : Vedic Aramati), Haurvatat and Ameritat (health and immortality).

Agni was a very sacred and friendly god of the Aryans. For Agni among all gods dwells with man as his companion and friend in the capacity of *domestic fire* —"the immortal among the mortals" No wonder the Vedic Rishi sang : "*Dyaush pitah, Prithivi matar adhrug, Agne bhratar*....."(Father Heaven, guileless mother Earth, brother Agni, be gracious unto us) and Agni was called *Agnivaishvanara* (Agni belongs to all men). We can easily imagine how primitive man in a chilly shivering shower, terrified by the thunderclaps, saw to his surprise and astonishment the old, dry stump of a tree suddenly catching fire and bringing him a comfortable sense of well-being in its warm glow. Not only that, nuts and some animals that might have been roasted by being caught in the fire tasted so much better and when after repeated attempts, lasting for centuries, if not thousands of years, he learnt at last how to keep fire by adding fuel to it and to make it afresh when extinguished by an accident—either by friction of dry sticks or stones—it was a great achievement for civilisation. By fire forests were easily cleared and the land was made suitable for agriculture. Metalic ores were melted in it and instruments were forged for martial and peaceful purposes.

Clays were baked in it into bricks, and fire was the creator of cities as the old Sumerian hymn naively expresses. But more than that. Fire cooked food and by softening the fibres through cooking, many food-stuffs that were before inedible became nutritious palatable dishes and by the domestic fireside radiating warmth, glow and comforts, it really domesticated man. Fire is essentially the builder of civilisation. As behind every natural phenomenon, the primitive mind could not but presuppose an animating spirit and a deity, it is natural therefore that favour should have been invoked of such a beneficent god.

According to the Vedic legend, the finder of Agni is Matarishvan which is but another name for lightning, and he is said to have brought it *from heaven 8, from the gods, very far away* and he gave it to the Bhrigu the Atharvan (the keeper of fire=firepriest, from Sk. athare=flame) who drew Agni forth by friction and gave it to Manu for safe-keeping. Angiras another Vedic Rishi family is also mentioned as having first kindled Agni. But the identity of Agni with lightning is very close and Indra the god of thunder and Agni the god of fire are merged into one : "I extol the greatness of that showerer of rain whom men celebrate as the slayer of Vrita : the Agni Vaisvanara slew the stealer of waters." As the lightning in the rains (clouds) Agni was also named Apam-Napat (son of the waters). And it was believed there was Agni in water as well as in plant. Agni descended into the earth with the rain and entered into the plant as a sap. Thus dry sticks could generate fire by friction, having the Agni principle in them. And in all sacrifices this time-honoured way of friction of two

dried sticks of the Asvatha tree was used to get the spark to make the holy flame. Sacrifice was regarded auspicious, for the smoke of fire was suppossed to ascend to the gods as a messenger for the mortals : "O Agni, thou from whom as a new-born male, undying flames proceed, the brilliant smoke-god goes towards the sky, for as messenger thou art sent to the gods." (VIII. 3).

The Iranians worshipped fire as Ātar, derived from Vedic Athare=flame and their priests were called Athravans (keepers of fire). Apat-Napot is also mentioned as a fire-god : "We sacrifice unto Apam Napot, the swift-horsed, the high and shining lord who has many wives (tongues of flame)."

Among the western Aryans, Agni was worshipped as Hellenic Hestia and the Latin Vesta, as the sacred guardian of every home. Fire was kept kindled in the inmost part of every dwelling as the holiest of holies and at every sacrifice to Zeus and other deities, Hestia (goddess of fire) is to preside and to receive the first invocation and the first share. According to the Hellenic myth fire was introduced by Argive Phoroneus, who may be none else but the Vedic fire-god Bhuranyu from which the Greek *pur* and the Teutonic *feur* have been derived.

Soma was the god of drinking. The entire ninth Mandala is devoted to its most sacred and solemn rites. All peoples more or less ancient and modern have indulged in some kind of spirituous liquor for reckless and undaunted courage in battles and for relaxation when excessively tired and fatigued or to silence the moral qualms in its pleasant narcosis or to drown the cares and anxieties in the seductive bowl of an intoxicating drink. Such a varied effect of

alcohol they could not but ascribe to a mighty god. It was to the Aryan, the elixir of life, joy in health, strength in weakness, medicine in sickness and rejuvenescence in old age. And they thought that the gods were so powerful, immortal and ever-youthful, because they partook in large quantity of this divine nectar which was the main food of the gods. And the pious souls after their death would ascend to that region where there is divine Soma (Moon) and partaking of it, would be immortal and like gods. In the Iranian scriptures, we see the clear distinction between the earthly yellow or golden Haoma (Soma) which is the king of all healing plants (Bundahis, 58. 10) and the white Haoma or Gaokerena which grows in Vourukasha (antariksha) and which is the ambrosia of the gods and by the drinking of which man on the day of resurrection will become immortal. (Bundahis, 42. 12 : 59 : 4). In the Vedic legend, it is the falcon who brought down the Soma plants and 'whilst coming down from the heaven the plants said : He will never suffer any wound, the mortal whom we touch.' (X. 97. 17).

Soma was possibly Eleusine Coracana, which is commonly known as *Ragi*, the ordinary millet used in the Hymalayan districts for making *Marua*, an intoxicating beverage. Milk was added to it to attenuate its acrid, astringent taste and to facilitate fermentation. Soma was often called *fiery liquid* and Agni was identified with Soma and it is due to the fiery effect of the drink. However god Soma was regarded as the personification of the moon and was married to the sun-maiden Surya. The moon had the reputation to exert a benificent influence on plant growth ; may be, because of its soothtng,

silvery rays and the Soma being the king of the healing plants, it is natural that the god Soma should be identified with the moon. The following hymns are explicit on this point :—

"Through the Law (Rita) the earth stands firm, the heavens and the sun, through the Law the Adityas stand, and Soma stands in the sky……Soma is placed in the midst of these stars. When they crush the plant, he who drinks, regards it as Soma. Of whom the priests regard as Soma no one drinks. Protected by those who shelter thee and preserved by thy guardians, thou Soma hearest the sounds of crushing-stones (for squeezing the juice from the plants) ; but no earthly being tastes thee." (X, 85).

"Where there is eternal light, in the world where the sun is placed, in that immortal, imperishable world, place me, O Soma ! Where the Vivasvat (Yama) reigns as king, where the secret place of the heaven is, where these mighty waters are, there make me immortal ! Where life is free, in the third heaven of heavens, where the worlds are radiant, there make me immortal ! Where wishes and desires are (fulfilled) where the bowl of the bright Soma is, where there is food and rejoicing, there make me immortal ! Where is happiness and delight, where joy and pleasure reside, where the desires of our desires are attained, there make me immortal." (IX. 113).

Asvins are the Soma libations to Agni. They are often represented in the Vedic hymns as riding on a golden chariot of two fiery horses. They are invariably twins, perhaps one is the offering of the libation and the other is the flame it causes. Their names are derived from *asva*, because the horses were known for their speed

and agility and it was supposed that the deity of the flames of the Agni would come riding at top-speed at the prayer of the votaries to cause the spark and the tongues of flame to shoot up. From the two aspects of the Soma libation and the spark and the flame it caused, the Asvins were also represented as the evening and morning stars as the volatalized sparks. But they were the divine physicians *Bhishaj* per excellence and attended the child-birth (Vl. 50. 7.) of the suffering mothers. They 'make the blind see; the lame walk' (1. 112. 8). Asvins rendered the virility of Gosha's husband Visvaka and made an artificial iron leg for Vispala which he lost in battle.

"You are the blessing of those that grow old at home and comfort to those who last longer; it is you, O Nasatya, the people call, the healers of the blind, the sick and the wounded. You have made young again old Chyavana as a (old) chariot is repaired to move; and it is you who have lifted up Tugra's son from the water." (X. 39. 3-4)

But Asvins were Bhishajas, only metaphorically in the Vedic terminology. Old Chyabana is nothing but the dying fire (Agni) of the morning kept at the sacrificial altar and the fresh offering of the Soma makes the fire bright, ardent and glowing again with flames, which the Vedic Rishis regarded as rejuvenation. Ghosha is the name of the tongue of fire and the impotent Visvaka is the dying fire, which by a fresh morning libation of the Soma offering, is made to shoot up into a bright, sparkling fire, which is interpreted as the restoration of his virility. The ancients did not regard fire as a natural phenomenon. It was to them the greatest and the most potent of gods, full of life, motility and activity. When

the morning fire was lacking energy and motion, they thought that the presiding deity lost his leg at night, in fighting the battles with the enemy of men and gods. And by Soma offering, the fire blazes forth, which means that he has got a new leg, or he could not move, that is the fire can not spread. Tugra's (ardent) son Bhujjyu (shining) is rescued from water, which really meant that out of the liquid libation of Soma, which drenched the altar, by the spark (Asvins) fire sprang up into life.

The Greeks worshipped Soma as Dionysus who introduced the cultivation of wine into Greece and was called the father of civilisation.

The ancient Greeks used to offer in their sacrifices, the fermented liquor known as *metha, Sk. Madhu* to blaze forth the flame, (Odyssey, XII. 362; Eschyle : Agamemon, 88-94), the Romans, wine, oil and grains (Virgile; Eneide, VI. 254; Ovide; Fastes II. 651-653) as the Hindus now principally use clarified butter (ghritam). But among the Greeks Asvins were designated as *Dioskoyroi* and among the Romans as Castor and Pollux as the guardian deities of the mariners and these deities according to the legend originated from an equine.

Yama and Yima are twin brother and sister, children of Vivasvat. And Yama is the evening twilight or the sinking sun and Yima the night. As it was supposed that life originated in the east, so in the west lay the land of the dead, the Elysian fields to which the sun hastened every evening and was reborn again every morning. As Yama was the first of the mortals, so he was the first to die and thus: "Yama is said to have crossed, to have shown the many, to have first known the path on which our fathers crossed over."

And he gathered the departed souls (pitris) in the Yamasadanam, over whom he ruled. Yamasadanam was perhaps the region of the moon where drinking the Soma the Pitris became immortal. The dying sun of the evening and the new-born sun of the morning, sleep, dream and the re-awakening from it refreshed and vitalised, probably suggested the idea of the immortality of the soul. Death was regarded but a more durable and prolonged sleep. So "death is Yoma's wise messenger." Sarameya, the children of Sarama, the four-eyed dogs were sent to protect the guests in their long journey on the celestial track.

The Avestan Yima, the son of Vivanghat was the first mortal and ruler of man and animal. (Fargard, II. 2). But his kingdom was like that of the Vedic Yama filled with supernatural persons (Fravashis = Pitris). (Farg. XIX). And 'the four-eyed dogs (Sag-did) watch at the head of the Chinvat bridge which leads from this to the next world and with his barking drives away the fiend (Drug) from the souls of the holy ones, lest he should drag them to hell.'*

This undue sanctity of the dog is perhaps due to the fact that it was the first domesticated animal. The dog was also regarded with great reverence by the ancient Egyptians and Chaldeans. We can easily imagine how the ancestor of the dog, the wolf, followed the hunting expeditions of the primitive man and whatever man left as worthless meat, the wolves feasted on them and they also frequented the neighbourhood of the cave-dwellings of the primitive man to get the remnant of the meat,

* J. Darmesteter : The Zend-Avesta LXXXVII.

carcasses and bones, which were regarded unfit for human consumption and were therefore necessarily thrown outside. Thus intimacy was formed between the wolf and the man and the wolf found that man was his friend. However it is possible that in an angry mood, a man killed a she-wolf with puppies, but thinking that the puppies might be nice play-things for his children, he spared them and brought them home. And the puppies returned this kindness with gratitude, affection and watchfulness for the interest of their master. They accompanied him in his chase, drove away any marauder from his cave-dwelling and watched it at night when he was asleep and they were of useful service to him in thousand other ways. Thus grew friendship between man and the dog which has lasted even to-day.

Vayu or Vata, though a modest god of gentle breeze, son of Dyaus (Heaven), the Greek Pan and the Latin Favonius, was however regarded with great respect by the Vedic Rishis, for when the gods were invited to the Soma feast, his was the first drink by right. (X. 168).

And in the Avestan he seems to have held a very prominent position. For we find the entire Ram Yast is devoted to him and even Ahura Mazda prayed to him, thus proving that Vayu was an older god than Ahura :—

"To this Vayu do we sacrifice, this Vayu do we invoke, for this house, for the master of this house and for the man here who is offering here libations and gifts. To this excellent god do we sacrifice, that he may accept our meat and our prayers and grant us in return to crush our enemy at one stroke. To him did the Maker Ahura Mazda offer up a sacrifice in the Airyana Vægah,

on a golden throne, under golden beams and a golden canopy, with bundles of *baresma* and offerings of full-boiling (milk). He begged of him a boon, saying: 'Grant me this, O Vayu! who dost work highly, that I might smite the creation of Angra Mainyu, and that no body may smite this creation of the Good Spirit!' Vayu who works highly, granted him that boon, as the maker Ahura Mazda did pursue it. We sacrifice to holy Vayu: we sacrifice to Vayu, who works highly."*

Surya (the sun) is the son of Dyaus (Sky) and the *eye of Mitra and Varuna.* And his golden chariot traverses the dustless path of the heaven, drawn by seven swift, glistening, winged mares (Harits). As Varuna is the judge and Surya being his eye, he observes everything and the Rishis try to bribe him as to report them sinless.

"The god's bright face has arisen, the eye of Mitra, Varuna and Agni; Surya fills heaven, earth and atmosphere, the breath of life of all that stands and moves..... .....The beautiful golden Harits, the bright ones, hailed by songs of joy, they mount to the highest heaven and in one day their course encircles heaven and earth..... And when he unharnesses the mares, the veil of darkness spreads over all things." (I. 115).

"The god who knows all beings rises aloft, drawn by his rays, that he Surya, may behold all things. Straightway like thieves, the stars with their brightness slink away before the all-seeing god. His rays are visible to all mankind, blazing like flames. All conspicuous on thy rapid course thou greatest light, illuminating the whole

* Ram Yast, I. 1-5.

firmament. Thou risest for the race of gods and for that of men, that all may behold thy light. With that same glance wherewith all may behold thy light. With that same glance wherewith Varuna, the illuminator, surveys the busy race of men. Thou O Surya, searchest the sky and the wide space, making the days and spying out all creatures. Seven mares bear thee on, O far-seeing Surya, in thy chariot, god of the flaming locks. Surya has harnessed the seven Harits, daughters of the car, self-yoked. Gazing out of the darkness up at the highest light, we have reached Surya, a god among the gods." (I. 50. 1-9)

"If thou, O Surya, at thy rising will report us truly sinless to Varuna and Mitra, we will sing thy praise." (VII. 60).

As the Sun in the dry season in the Shapta-shindavas was cruel, pitiless and destructive, they worshipped as Savitar, the generating and the vivifying influence of the solar energy. Thus Savitar became *vishvarupa* (having all forms) and consequently the *Prajapati* (Lord of all beings). The most sacred hymn, the essence of the Vedas, the holy *Gyatri* has been dedicated to Savitar, which even to-day countless millions of Brahmins recite every morning and evening with the rising and the setting sun :

"He who hastens hither through the dark aerial space, who lays to rest whatever mortal is, or immortal, god Savitar on his golden chariot comes towards us, surveying all creatures." (I. 35.2)

"With golden hand comes hastening Savitar the god, pursuing busily his work betwixt heaven and earth ; he drives away oppression, leads Surya forth, through the dark realm of air he hastens up to heaven." (I. 35. 9)

"The god his mighty hands, his arms outstreches in heaven above, and all things obey him; to his commands the waters are attentive and even the rushing wind subsides before him. Driving his steeds, now he removes the harness and bids the wanderer rest him from his journey; he checks the serpent-smiter's eager onset; at Savitar's command the kindly night comes. The weaver rolls her growing web together and in the midst the workman leaves his labours; the god arises and divides the time (night from day)—god Savitar appears never-resting. In every place where the mortals have their dwelling, the house-fire far and wide sheds forth its radiance, the mother gives her son the fairest portion, because the god has given him the desire to eat. Now he returns who has gone forth for profit; for home the longing wanderer's heart is yearning and each, his task half-finished, homeward journeys; this is the heavenly inciter's ordinance." (II. 38. 2-7).

"Tvashtar Savitar, the god of many forms (vishvarupa), has produced and nourished all creatures and all these beings are his own." (III. 55. 19).

"Whatever offence we may have committed against the race of gods, through feebleness of understanding or through violence after the manner men—against gods and also against men—inspite of all, O Savitar, take from us the sin." (IV. 55. 3).

"We meditate on the desirable light of the divine Savitri who influences our pious rites; or: Of Savitar, the heavenly, that longed for glory may we win and may himself inspire our prayers." (Tat Savitur varenyam bhargo devasya dhimahi dhio o nah prăchodyat. The Gyatri, III. 62. 10).

In the Avestan the Khorshed Yast is devoted *'unto the undying, shining, swift-horsed Sun'* and his identity has been often merged with Mitra.

Among the western Aryans, Surya was called Swarog by the ancient Slavs* and Helos by the Greeks. The lovely, glistening golden-winged Aarits became Charis in Iliad and Gratiæ (Graces) among the Latins.

Usha the Dawn-goddess, the daughter of the Sky (Dyaus) was a great favourite of the Vedic Rishis (sages). The fresh delicate, roseate tint of her colour, the wide-expanding golden curls of her hair, her bright, joyous face and smiles, her modesty, yet her seductive, inviting look, her grace and her charms were very pleasant to them and some of the best hymns of the Rig-Veda are dedicated to her. And the Vedic sages are never tired of watching her golden chariot followed by her admirer Surya who in mad pursuit advances towards her with his swift steeds. The delicate and frail Usha, though not unwilling, yet feels coy lest the fiery passionate touch of her ardent lover scorches her and she hurries along over the golden path in the dustless aerial region. And one Rishi advises her to speed faster or Surya may clasp her in his fiery arms of glowing ardor and mark her with the brand of a thief or a slave (V. 79. 9). However Surya follows her with the untiring enthusiasm of a young lover. At last after a long day's journey they meet and the whole western sky radiates with the crimson glow in the joy of their mutual embrace. But only for a few brief moments. In the intoxication of their youthful love, they forget their weapons and the cruel fiend Darkness comes and

* Ralston : Songs of the Russian People, P. 85.

engulfs them. Yama in his kindness takes them to his abode (the moon) and refreshes them with the divine nectar, the Soma-drink, and they become rejuvenated. And every day they play again and again the same lover's game, mindless of the past.

Usha also as the goddess of the dawn of the day, is the mother of the gods, giver of joys, gifts and riches :

"Rise ! Our life, our breath has come back ! The darkness is gone, the light approaches ! Usha has opened a path for Surya to travel ; we have reached the point where our days are lengthened. The priest, the poet, celebrating the brightening Usha, arises with the web of his hymn ; shine therefore, magnificent Usha, on him who praises thee···Mother of the gods ! manifestation of Aditi banner of the sacrifice, mighty Usha, shine forth ! Arise ! Lend a gracious ear to our prayer, giver of all boons !" (I. 113. 16-20).

"She shines upon us like a young wife, rousing every living being to go to his work. The fire had to be kindled by men ; she brought out light by striking down darkness. She rose up spreading far and wide and moving towards every one she grew in brightness, wearing her brilliant garment. The mother of the cows (celestial), the leader of the dogs, she shone gold-coloured, lovely to behold. She the fortunate, who brings the eye (the sun) of the god, who leads the white and lovely steed (of the sun), the Dawn was seen revealed by her rays, with brilliant treasures she follows every one. Thou art a blessing when thou art near, drive far away the unfriendly ; make the pastures wide, give us safety. Remove the haters, bring treasures. Raise up wealth to the worshipper, thou mighty Dawn. Shine for us thy best rays, thou bright Dawn,

thou who lengthenest our life, thou the love of all, who givest us food, who givest us wealth in cows, horses and chariots." (VII. 77)

"Usha follow the track of the Dawns that are past and is the first of the unnumbered Dawns that are to come.....How great is the interval that lies between the Dawns that have arisen and those which are yet to arise? Usha yearns lovingly after the former Dawns and gladly goes on shining with the others (that are to come). Those mortals are gone who saw the earliest Usha dawn; we shall gaze upon her now; and the men are coming who are to behold her on future morns.....Perpetually in the former days did the divine Usha dawn; and now to-day the radiant goddess beams upon this world: undecaying, immortal." (I. 113. 8-13).

But Usha is but one of the names of the lovely Dawn-goddess. She is also called Ahana and Dyotana:

"Ahana comes near to every house, she who makes every day to be known. Dyotana (the dawn), the active maiden, comes back for evermore; she enjoys always the first of all goods." (I. 123. 4).

To the western Aryans Ahana became Athene and Dyotana, Daphane and they resemble very closely the Usha caracteristics. Like Usha, who is not mentioned as having any mother, but to have sprung from the head of Dyns (murddhadivah), the East, the forehead of the sky, Athene also springs from the forehead of Zeus (the sky-god). And as Usha is followed and loved by Surya, Daphane is also similarly loved by Phoibos. And Usha also had the reputation for truth and wisdom like Athene:

"Usha endowed with truth, who art the sister of

Bhaba, the sister of Varuna, be thou hymned first of the gods." (II. 8. 10).

However in an arid climate like that of Shaptashindhavas, especially for an agricultural community like the Aryas, the bright sky (Dyaus), the star-spangled firmament (Varuna), the intoxicating drinks and the dreamful, silvery beams of the moon (Soma), the unclouded fiery sun (Surya) and the radiant, smiling, almost playful dawns (Ushas) are not of so much importance as the rain and plenty of rain for the welfare of the cattle and the crops. So the monsoon god (Indra) subjugated all these ancient deities. For however visionary might have been the Aryans, they were a practical people and their success in life, as the history of the world has shown, lay in the fact, that at the right moment they had been always able to subordinate all other objects to that supreme end in view. We find that the very Rishis who were so fond of admiring the pretty Usha, in exalted ecstacy praised Indra for smashing her golden chariot, which in plain vulgar language means that the people were tired of looking at another bright morning, heralding a rainless day, when they were anxiously watching the sky for the clouds and they were extremely delighted when they saw a sudden monsoon cloud spreading over the morning eastern sky. Rain meant for them, as it does to-day in the Punjab, a luxuriant crop, a rich harvest, plenty for men and cattle, and a prosperous year, and lack of it dearth, destitution and misery for the community at large. No wonder the Vedic poet was loud in his ungallant praise when he saw the signs of rain in the sky :

"This heroic task also, this manly deed, O Indra !

thou didst perform, that thou didst smite the woman who planned mischief, the daughter of the Sky (Dyaus): this Usha who was exalting herself, thou didst strike her down. Usha fell in terror in her shattered car when the mighty one felled it to the ground. There it lay, broken utterly, while she herself fled far away." (IV. 30).

But all clouds do not necessarily bring rain. And in their childlike mind they supposed that the cloud-kine were stolen and hidden by the enemies like the hiding thief Vritra, the strangling snake Ahi (Azi Dahakathe biting snake in the Avestan) and the marauder Pani. Monsoon is usually accompanied by tempestuous thunder showers. In the rambling of the thunder, they hear the war-drums of the gods and in the stormy winds the assistance of fleet Maruts the children of Prishni and terrible Rudra (the stormy sky) and then mighty Indra with his irresistable lightning-spear pierces the sneak Ahi in his den and kills the draught fiend Vritra and Indra is praised therefore as Vitrahan (slayer of vritra) and in the Avestan Mithra who absorbed the traits of Indra he is also known as Verethraghna. When Indra has accomplished this great deed for the benefit of mankind, then the bountiful celestial kine (clouds) bestow their milk in rain-showers on the parched and thirsty Prithivi (earth) who with rapturous heart drinks it, praising the glory of Indra.

Thus Indra became the head of the Vedic pantheon, brushing aside the other ancient gods. The Ārya bard reflecting the sentiment of the people rightly said: "Great is thy prowess, Indra, we are thine; satisfy Maghavan the desire of thy worshipper. The vast

heaven has acknowledged thy might." And Parjanya, the rain aspect of Indra (the monsoon-god) is praised thus :—

"Sing unto the strong with these songs, laud Parjanya, with praise worship him. Loud bellows the Bull; he lays down the seed and fruit in the herbs. He cleaves the trees asunder, he slays the demons (Rakshasas); all living creatures fear the wearer of the mighty bolt. Even the sinless tremble before him, the giver of rain, for Parjanya, thundering slays the evil-doers. As a driver urges his horses with his whip, he makes the rainy messengers appear. From far arises the roar of the lion when Parjanya makes the cloud full of rain. The winds rage, the lightnings shoot through the air, the herbs sprout forth from the ground, the heavens overflow, refreshment is borne to all creatures when Parjanya blesses the earth with rain. Thou Parjanya, shield us well, by whose doing the earth is shaken, by whose doing the hoofed herd is supported, by whose doing herbs of all kind sprout forth.....O come to us with the thunder-cloud, pouring down the waters, Ahura, our father! Roar, thunder, give fruit, fly round us with thy chariot that is filled with water. Pull strongly the downward-bent, well-fastened water-skin; may the heights and the valleys be made even. Lift up the great barrel, pour down; loosened may the streams rush forward. Drench heaven and earth, give good drink to the kine." (V. 83. 19).

Truly the Rig-veda is the priceless inexhaustible store-house, nay the fountain-head of the ancient Aryan myths. The Iranians were influenced more or less by their powerful neighbours the Babylonians and the Assyrians. Greece came in too intimate relation with the Phoenicians and Egyptians whose superior culture, hoary-

with ages was necessarily stamped on the Hellenic mind and thus they lost track of their own traditions. The Vedic Aryas alone, almost secluded from the entire world by inpregnable mountain barrier except through two or three difficult and dangerous passes and the treacherous unlimited expanse of the ocean, proud and deeply religious-minded, kept and transmitted their ancient traditions in their pristine simplicity as the most precious inheritance of the race.

There was a time and it was not long ago when it was believed that God or gods created man for his enjoyment of this earth. It is fast dawning on the thinking people that gods are rather creations of man to explain the natural phenomena which he otherwise could not explain. God in the final analysis is supposed to be the refuge of weakness, credulity and ignorance In the name of God and religion (injunction of the god) much crime has been and is being committed in the world. Yet on the whole it has exerted a tremendously uplifting and beneficent influence. When moral conscience has not been fully developed, when the sense of right and wrong is only co-relative with religious formulas, the fear of the anger of the god and the salvation of the soul have restraind man from the commitment of many vicious and corrosive acts and have gradually trained him to the nobler conception of duty and honour, slowly attenuating and modifying the crude inheritance of brutal instincts. Religion has been the greatest progressive school of man. But for it society would have been torn into pieces by mutually destructive acts. Civil Law is but of recent growth and though at present divorced from religion, its root is deeply embedded and its foundation laid in,

or rather it is a slow accumulation of, the religious code of ethics. Moreover Civil Law is only operative in a very insignificant part of the world's population and even there unsupported by the religious conscience and but for the fear of the masses of the population, the society would be irretrievably engulfed in crime-waves which the operation of the Civil Law could hardly check. Religion is society's natural strongest rampart, an auto-defensive mechanism for self-protection, and a great integrating and uplifting force. When therefore narrow-minded fanatical bigots, whose ignorance is equal to their audacity, in the frenzy of monomania, try to supplant beautiful primitive nature myths, which they call polytheism by crude anthropomorphism which in their vanity they call monothiesm and regard it superior, that is, when they try to substitute one natural inspiring superstition with one worse, beunmbing and artificial superstition, however honest may be their motive, unconsciously they do the society a great harm. God or gods are the reflex and the barometer of racial genius, intelligence and power of organisation. It is simply an unconscious adaptation of the racial intelligence to the cosmic laws. With knowledge and understanding of natural phenomena, the kingdom of gods retires to far and father distance. What is needed for reform and progress, is not the opinion but the spread of knowledge, and in the meantime to have patience and to have reverential respect for the honest faith of others. It should not be rudely shaken. For mind can not be in a vacuum state. Mind wants to know things and to explain everything. Before knowledge can give the key to unlock the mysteries of existence, the mind has to be filled with one superstition or the other. For the word

of god or the miracles of deities can explain every thing which otherwise rationally can not be understood, and can answer any question, thus to tranquilize the inquisitive mind. In true faith therefore, however crude it might appear to others, lies the vital germ of progress of the individual, his real consolation and his happiness. It is a crime to take it and to give nothing better in its place, as it is his most sacred possession, and priceless treasure.

IV.

THE HINDI LANGUAGES.

The language spoken by the aborigines of India, the first settlers of the country, is agglutinative in speech and is known as Kolarian or Munda language. It is not spoken in its purity anywhere at present in India. It is mixed more or less in the Indo-Gangetic basin with the Indo-Aryan words and in the South with the Dravida vocabularies. However there are nearly three millions of people in the Santhal Parganas and Central India who are computed in the Census report to speak Kherwari or the Santali language. There is an ancient tribe Savara (about 16000) who live on the border of Orissa and Madras who speak a mixed Telegu language. The Gond language which is spoken by nearly a million people is a mixture of the Dravidian and the Aryan speeches on the substratum of the Kolarian.

The two principal Dravidian languages are Tamil and Telugu. They are spoken by nearly 60 millions of people.

The Tamil or Arva is spoken all over Southern India, extending over to Northern Ceylon. It has a very rich and extensive ancient literature. Its literary language is called *Shen* (perfect) and the spoken language *Kodum* (rude). It is spoken by nearly 47 millions of people. Malayalam, spoken on the Malabar coast by 7 millions of people and Kanarese spoken in Mysore and in the Ghat by about 12 millions of people are its principal

offshoots. However Kanarese has an extensive and ancient literature of its own and at present it is written in a character similar to that of Telugu. Malayalam took its distinct form as a separate dialect from its mother Tamil about ninth Century A. D.

Telugu or the Andhra language is the other important Dravidian speech. It is spoken by nearly 22 millions in northern Dravida. It has copious literature of its own written in a character akin to Deva-nagari.

The most important group of the Hindi Vernaculars is the speech of Indo-Aryan origin. It is spoken by nearly 240 millions of people. Its principal subdivisions are: Northern and Northwestern Hindi (40 million); Midland Hindi (80 million); Southern Hindi or Bihari (40 million); Gujrati (10 million); Marathi (20 million) and Bengali (50 million).

We have shown that the Vedic Aryans settled in the Indus basin (Sapta-sindhavas). But they did not all come at once. They infiltered slowly into the territory in the course of centuries. And it is certain that the later immigrants did not speak exactly the same language or at least had not the same accentuation and pronunciation as their predecessors. And when the second band of immigrants from Mesopotamia reached India and pushed their way to the Madhya-desa where they established powerful kingdoms and extended the Aryan influence and culture, there was more confusion of speech. And it was in the Madhyadesa a standardized literary language was regulated with fixed grammatical rules and canons about the 8th Century B.C. and it has been known since as Sanskrita which means reformed, from the root *kri* (kar) cognate with the Latin Creo = to make and *sam* = together.

But the Indo-Aryan people did not speak the Sanskrit. It was simply cultivated by the scholars who wrote in it as a common standardized vehicle of understanding. The people spoke their own natural language, first the Vedic dialects which gradually degenerated into Prakrita (natural) by the softening of the harsh consonants into almost fluidic sounds, as from *putra* into *puttya*.

In the Seventh Century B.C. the petty Aryan city-republics were confederated into a powerful kingdom under Kosalas, with their capital at Savatthi and as at the court of Savatthi, Pali was spoken, it became the standard language of the whole North-eastern India. When Goutama the Buddha decided to preach his Dhamma in the language of the people, he himself being a Kosalan and Pali being the most spoken language at that time, he chose it and with the spread of Buddhism, Pali became the sacred language of the Buddhists. Buddhist literature being written in Pali, its grammatical rules and regulations were fixed and like Sanskrit, it soon lost its elasticity and became crystallized.

About the fifth century B.C. Mathura was the capital of the powerful Panchala confederacy which extended as far as Kausambi (Kosam) and Kanyakubja (Kanauj). Saurasenis being the ruling princes in the court of Mathura, it became the standard language of this extensive and powerful kingdom, and after their rulers, the language as spoken was known as Sauraseni. Many of the Jaina sacred scriptures are written in Sauraseni. However though known by different names, there was hardly any difference between the Pali and the Sauraseni and both were very alike to the later Vedic dialects, excepting in the deterioration of the harsh consonental sounds.

But as the Aryan conquest extended farther and farther, the Aryan language not only absorbed many of the vocabularies of the conquered, but there were also manifest phonetic changes. Many of the consonants have entirely disappeared and the remnants of the worn-out detritus are loosely strung together round faint and floating vowel-combinations—diphthongs, and the declensional and conjugational terminations, if not entirely lost, are at least well-polished and smoothened, so that the language became sweet and melodious. Though it was called Apabhramsa which means *corrupt* or *decayed*, its utility for lyric poetry was early recognised. In the well-known Sudraka's drama—Mrichchakatica (Little Clay-cart), we come across fine specimen of Apabhramsa speeches. Songs are generally in Maharastri, the speech of the 'great kingdom, Vidharva (Berar) extending southwards from the River Nerbuda to the Krishna, including part of Hyderabad and the Bombay Presidency. Sauraseni for prose, Avanti (Ujjain), Ardhamagadhi (Oudh), Shaurastri (Gujrat), Magadhi (Berar) and the Pisacha language are put in different characters, thus showing the cosmopolitan ancient Hindu culture, and that these speeches were but slight local variations and there was not much fundamental difference. Nor is the Apabhrangsa literature insignificant. Though much has been lost, there is enough to testify to its ancient greatness. The oldest Jaina *Sutras* are in Ardhamagadhi, as the Buddhist *Sutras* are in Pali. The canonical works of the Digambara (Nude Jaina sect) are in Sauraseni and the non-canonical literature of the Svetambara (White-clad Jaina sect) is in Maharastri. Hala (between 3rd to 7th Century A.D.) made his famous collection of lyrical poems, which is well-known as *Sattasi*

(Saptasaptika). Pravarasena wrote his great epic *Ravanavaha* based on the Ramayana traditions before the Seventh Century A. D. His contemporaneous Vakpati celebrated the conquest of Bengal by Yasovarman, king of Kanauj, in his well-admired Gauravaha. Hemachandra (1150 A. D.) wrote his famous Dvyasraya Mahakavya of which the last eight cantos Kumarapala-charita were in Apabhramsa to illustrate his Sanskrit-Prakrit Grammar—*Siddha-Hemchandra.* Rajshekhara wrote his entertaining comedy *Karpuramanjuri* which indicates that the language of the Aryabharta was yet of an uniform standard with but slight local variations.

In course of time, with lack of rapid communications, the foreign invasions, the splitting up of mighty kingdoms into petty states with mutual jealousy and internecine wars, the decay and the disappearance of the central Buddhist organisations and their influential university-centres and last though not the least, the Mohammedan conquest, accentuated the local differences of the Apabhramsas and which has resulted in the development of local vernaculars, though there is a fundamental unity among all of them, *e. g.* the predominance of Sanskrit words is common to all, varying from about 90 P. C. in Bengali to 40 P. C. in Sindhi.

Hindi is the corrupt form of Saraseni in the Gangetic-Jamuna basin, of Avanti in Rajasthan, Ardhamagadhi in Oudh and Bundlekhand. Of these Braja-Bhasa spoken round Mathura is the purest and very similar to that of older Sauraseni of which it is the direct lineal descent. Though Hindi is designated by various local names as Bhraja-Bhasha, Kanauji, Bangaru, Bundeli, Bhoj-puri, Marwari (Rajasthani), Lahnda (Gurumukhi),

the dialects merge one into the other with but difference of delicate shades of accentuation and intonation. In the Punjab, the language is a little abrupt and sharp, as well as partially mixed with foreign words, especially Persian. This Persianised Hindi is called Urdu. The name originated from *Urdu-e mu'alla* (the Royal Military Bazar) where psycophant courtiers used this kind of expression to flatter the vanity of Persianised invaders and their underlings, and it became popular. And now it is generally spoken by the Mahomedans in upper India and Hyderabad.

However in Cashmiri, there is a substratum of Pisacha speech. And it is found in Sindhi, Gujrati and and even in Marathi. It is probably Scythian in origin. It is an intermediate form of speech between Aryan and Iranean. Its cognate tongues, Kafir is spoken in Kafirstan, Khowar in Chitral country, Shina in Gilgit valley, and Kohistani in the Kohistans of the Indus and the Swat rivers.

Sindi is derived from Avanti like Lahanda of the Punjab and has Pisacha basis, and is mixed with many Persian and Arabic words.

Gujrati is a mixture of the derivatives from Shaurasthi and Maharastri with a slight infusion of Pisacha (Shina) language. Marathi has sprung from Maharasti. It has two local dialects known as *Konkani* and *Desi Marathi* but they hardly differ from each other except in a few accents.

Bihari, Bengali, Uriya and Assamese are the corrupt forms of Magadhi. And their relation is so intimate that there is hardly any difference, between Bengali, Assamese, Uriya and Southern Bihari except in a few intonations.

In fact all the Hindi vernaculars are kindred tongues and they merge into each other. They may be called by different names, as the Scandinavian language is known, Danish, Swedish and Norwegian, though they are identically one, and there is more difference between French Patois, from the North and the South German, between the North American and the English, between the English and the Welsh, than between Bengali and Braja-Bhasha or Gujrati. Assamese loses its identity and fuses easily with Bengali, and Bengali into Bhojpûri and Bhojpuri into Bhraj-Bhasha and Bhraj-Bhasa into Gujrati or Marathi and so on; the connecting chain is too intimate and binding and hardly there is any gulf of separation between any of them. Bengali spoken in any part of Northern India would be understood as Hindi in Bengali. It is true the colloquial expressions of Hindi are better understood not only in every part of India, but also in greater India. But Bengali or Gujrati written in Nagari character would by no means be a difficult thing for a Hindi *literti* to comprehend. The Bengali women often ignorant of Sanscrit and even of reading their language easily comprehend Tulsi Das's Ramayana or the sacred *kathas* of the Pandits of Beneras. The expulsion of Persianized words, the gradual elimination of local slangs and the steady introduction of Sanskrit vocabularies in their place are slowly moulding an unified language, and a common script like Nagari would in a few generations create an uniform, standardized, literary language.

The Indo-Aryan language is a member of a very large family, called Indo-Germanic or Indo-European, Vedic and its derivative formations, the classical Sanskrit, Pali,

Avanti, Sauraseni, Maharastri, Magadhi, Ardha-magadhi, Pracya; and their secondary transformations, Western Hindi (Hindustani, comprising of Bhraj-Bhasa, Bundeli, Kanauji, Dakhini and their tertiary accumulation, Urdu), Eastern Hindi (Awadi, Bagheli), Lahnda (Hindki, Jatki, Multani), Kashmiri, Kohistani, Sindi (Lari), Marathi (Desi, Konkani), Gujrati (Bhili), Rajasthani (Marwari, Jaipuri), Bihari (Bhojpuri, Magadhi, Maithili), Orya, Bengali, Assamese, Punjabi, Pahari (Naipali) and Sihghaese form but a minor section of the whole.

Their next kindreds are in Gandhrra (Afganistan), Iran (Persia) Caucasia and Armenia.

Afghanistan : Afghan (Pukhtu, Pasto), Beluch, Galcha.

Chitral, Kafirstan : Pisacha (Shina, Khowar, Kafri).

Iranian : Avestan, Bactrian, Old Persian, Pahlavi, (Pazend, Parsi, Huzvaresh), Modern Persian, Kurdish, Ossetic.

Anatolic (Armenia, Ancient Phyrgia, Southern Russia): Armenian (Old and Modern); Phrygian, Scythian.

Thraco-Illyrian : Thracian, Illyrian, Albanian (Gueg, Tosk).

Balto-Slavic : Old Slavic, Russian, Bulgarian, Servo-Croatian, Slovenian Czech or Bohemian, Moravian, Slovakian, Polish, Kasubian, Polabian, Old Prussian, Lithuanian, Letish.

Hellenic : Old Ionic, New Ionic, Attic, Doric, Æolic, and Modern Greek.

Italic : Latin, Langue d'oil, Langue d'oc, French, Provencal, Franco-Provencal, Catalan, Spanish (Andulasian, Argonese, Asturian, Castilian, Leonese), Portugese (Galician), Italian (Sicilian, Tuscan, Milanese), Rhæto-Romanic, Rumanian.

Celtic : Gaulish, Cornish, Welsh, Breton (Armorican), Irish, Scotch Gælic, Gælic (Erse), Manx.

Teutonic : Gothic, Old Norse, Icelandic, Scandinavian, Old High German (Frankish, Alemanic, Bavarian), Middle High German, German, Old Saxon, Plattdeutsch (Low German) Dutch, Flemish, Friesic, Anglo-Saxon (Old English), English.

And though English forms but a link in a distant chain, yet its relation with Sanskrit has not been entirely effaced and can be easily traced as the following examples will show.

Skt. *bhu* = become, be ; Gk. *phy-o* = grow ; Lat *fu-i* = became ; Eng. *be*. Skt. *bhaj* = divide, share ; Gk. *phag-ein* = get one's portion, eat ; *phag-os* = oak (tree yielding edible fruit) ; Lat. *fag-us*=beech ; Eng. beech. Skt. *bha* = shine, appear ; Gk. *phe-mi*=reveal, say ; Lat. *fari* = say : Eng. *ban* = public proclamation. Skt. *vabh* = weave ; Gk. *uph-e* = web ; Eng. *weave*. Skt. *lubh* = desire ; Gk. *lips* = longing ; Lat. *lub-et* = it pleases ; *lief* = dear.

Skt. *pada* = foot ; Gk. *pod-a* = foot ; Lat. *ped-em* = foot ; Eng. *foot*. Skt. *para*=far ; Gk. *pera* = distant ; Lat. *per-en-die* = day after ; Eng. *far*, *fore*. Skt. *apa* = away, off ; Gk. *apo* ; Lat. *ab*. Eng. *off*.

Skt. *dvar* = door, Gk. *thur-a* ; Lat. *for-is* ; Eng. *door*. Skt *rudhira* = red ; Gk. *erythros* ; Lat. *rub-er* ; Eng. *red*. Skt. *udhar* = udder ; Gk. *outhar* ; Lat. *uber* ; Eng. *udder*. Skt. *dva*=two ; Gk. *duo* ; Lat. *duo* ; Eng. *two*. Skt. *tri*= three ; Gk. *treis*, *tria* ; Lat. *tres*, *tria* ; Eng. *three*. Skt. *udra* = otter ; Gk. *udra* = water-snake ; Eng. *otter*. Skt. *dant*=tooth ; Gk. *o-dont-a* ; Lat. *denten* ; O. Eng. *tano*= tooth. Skt. *jnana* = know ; Gk. *e-gno* ; Lat. *cogno-vit* ; Eng. *know*. Skt. *jan*=beget, be born ; Gk. *ge-gon-os*=born ;

Lat. *gen-ui*=begat ; Eng. *kin.* Skt. *yuga*=yoke ; Gk. *zug-on* ; Lat. *jug-um* ; Eng. *yoke.* Skt. *go*=cow ; Gk. *vous* ; Lat. *bo-s* ; O. Eng. *cu*=cow.

Of course the relation between the Vedic Sanskrit and Avestan is very close. Gatha can be translated into Sanskrit, almost word by word, with but slight phonetic changes. But even the relation of Sanskrit with Greek or Latin is not very distant as is generally supposed. Thus for an example, the hymn of the Rig-veda, VI. 51. 5 can be translated into Greek or Latin with but little change :

Dayus	pitār	prithivi	mātar	adruk
Zeu(s)	pater	plateia	meter	atrek (es)
Agne	bhrātar	vasvah	mrilata	nah
Ignis	frater	———	be mild	nos.*

The Indo-Germanic people must have lived together in a cold climate, as the Sanskrit *hima,* Greek and Latin *hiems,* and Old Slav *zima* could not have otherwise the identical meaning.

Even the verbal terminations are almost the same :—

	Sanskrit.	*Avestan.*	*Greek.*	*Latin.*
I am :	asmi	ahmi	emmi	sum
Thou art :	asi	ahi	essi	es
He is :	asti	asti	esti	est
We are :	'smas	hmahi	esmes	sumus
You are :	'stha	sta	estē	estis
They are :	santi	henti	enti	sunt

* Dyaus (Sky) father, Prithivi (Earth) kind mother, Agni (Fire) brother, ye Vasus (Bright Ones) have mercy upon us.

	Old Slavic.	*Gothic.*	*Lithuanian.*	*Armen.*
I am :	yesme	im	esmi	em
Thou art :	yesi	is	essi	es
He is :	yesto	ist	esti	ē
We are :	yesmo	sijum	esmi	emo
You are :	yeste	sijuth	estē	eq
They are :	somte	sind	(esti)	en

M. Paul Regnaud has given a complete list of Sanskrit roots, he found in Latin and Greek in his scholarly work *Dictionaire Etymologique du Latin et du Grec dans ses rapports avec le Latin d' apres la methode evolutioniste—linguistique indo-europeenne appliquee.* However as it may not interest the general readers, we are giving below* a partail list of the common words found in Sanskrit, Zend, Greek, Latin, Teuton, Slav and Celtic languages after F. Max Müller's collection in his *Biography of words* and *Home of the Aryans.*

* See Appendix A.

PHOENICIAN		GREEK		ROMAN	
NAME	EARLIEST FORM	EARLY FORM	LATER FORM	EARLY FORM	LATER FORM
OX-HEAD		A	A	A	A
HOUSE		B	B	B	B
CAMEL		Γ	Δ	C	C
DOOR		Δ	E	D	D
WINDOW		E	F	E	E
HOOK		Y	I	F	F
DAGGER		I	H	Z	Z
FENCE		H	I	H	H
HAND		I	K	I	I
HAND		K	Λ	K	K
OX-GOAD		Λ	M	L	L
WAVES		M	N	M	M
FISH		N	O	N	N
EYE		O	Γ	O	O
LIP		Γ	P	P	P
HEAD		P	Q	Q	Q
HEAD		Q	P	R	R
TEETH		W	Ξ	S	S
MARK		T	T	T	T

V.

HINDI SCRIPTS.

The history of the Hindi alphabets is shrouded in mystery. It can not be traced directly step by step to its origin as in the Egyptian hieroglyphic or Assyrian cunei form writing. In the specimen of its most ancient writing, or the first time we see it mentioned, we find it already well-developed in its evolution. The oldest allusion to writ ing is found in one of the Buddhist *Silas* incorporated in *The diologues of Buddha* and was compiled within the first century of Buddha's death and which can not be later than 450 B.C. In this the disciples were enjoined not to indulge in children's games, of which *Akharika* is mentioned as one of them, interpreting it as *guessing at letters traced in the air, or on a playfellow's back.** In *Vinaya* which is a treatise on conduct and which is almost contemporaneous with the previous work mentioned, writing (lekha) is praised as a distinguished art.† And though the sisters of the Order were forbidden to indulge in worldly arts, there were exceptions to the rule and writing was one of them.‡ A criminal "who had been written in the king's porch" which means that such a man was a refugee of justice and to that effect, a notice was hung at the entrance of the palace for the public

* T. W. Rhys Davids-Diologues of the Buddha. Vol. I. P. 3-26.

† Vinaya, IV. and 7.

‡ Vinaya, IV. 305.

knowledge, was forbidden admission to the Order.* In an argument as to what profession a boy should select, the parents say that if he adopt the career of a *writer*, he will live in ease and comfort: but on the otherhand his fingers will ache.† If a member of the Order write to a man, disserting on the advantages of suicide, then for each letter in the writing, he commits an offence.‡ All this clearly indicates that writing was well known and was very ancient and popular in India at that time, otherwise it could not be children's sports, or public notices given through writing. Of course the word writing is expressed by *lekham chindati* which really means *scratches a writing* perhaps with an iron stylus like the Assyrians, but instead of on the clay, it was done on the palm leaves and wooden boards. It is well-known that all the modern alphabets, at present used in India, Ceylon, Burma and Siam have evolved out as local adaptations from the *Brahmi lipi*, the sublime writing. But did the *Brahmi lipi* originate in the country, as did the Demotic, Hieractic and Lienear scripts in Egypt out of the Hieroglyphics (Gr. ieros = sacred, glyphein = to curve) as abbreviated and conventionalized forms? Or was it imported from abroad and if so by whom, whether by the Aryans or by the Dravidians?

It is true that the Indian climate is not suitable like Egypt for the preservation of writing materials, for not only the dampness and heat, but also the insects and worms are very destructive. However from whatever

* Vinay, I. 75.
† Vinay, I. 77. IV. 128.
‡ Vinay. III. 76.

has been discovered, it is evident that the art of writing has been introduced into India by the Dravidians.

The Bower manuscript found in Mingai, near Kuchar, containing some medical formulas, though written on birch bark-sheets with ink, was made in the shape of palm leaves (Corpha talipot) and pierced in the centre with hole through which a string could be passed to hold them together, and which is very well suited to the palm leaves but quite unsuitable to the birch bark-sheets, for they are very delicate and fragile and a hole and a string are very apt to break and tear them down. This clearly indicates that writing was introduced into northern India from the southern part where palm leaves were available as a writing material, and which could not be had in the northern section of the peninsula where chiefly the Aryans settled.

Now the question arises whether the Dravidians developed the alphabets out of the pictographs or borrowed them from abroad, either through commercial intercourse or they brought them when they migrated from the Euphrates valley. According to Weber and Buhler, quite a large proportion of the oldest Hindi alphabets are fundamentally identical with the letters on certain Assyrian weights and especially the Mesa inscription of the seventh century B. C. Almost one third of the twenty Assyrian letters of the seventh century B. C. are identical with the oldest forms of the corresponding Hindi letters. Another third are very similar. And the remaining third are not radically different from each other.*

* Weber: Indian studies, Part III. Buhler: Indische Paleographie.

The oldest specimen of Hindi writing, yet discovered, is perhaps found in the inscriptions on the vases, discovered by Peppe in the Sakya tope. Here the letters are not only primitively inscribed, but also they have not yet attained to their phonetic maturity and fullness. Thus Sakyanam is written as *s ki y nm* which is almost syllabic and neither the vowel or the dipthong is yet well developed. In the edicts of Asoka, the letters are clear and fine and have their complete phonetic expressibility. The earliest sample of manuscript is perhaps the one discovered in the ruins of the Gosinga Vihara, thirteen miles from Khotan, written on birch bark-sheets, held together by silk thread sewn at both ends, in Kharosti character, used at that time in Gandhara and introduced in Khotan about 500 B. C.

The question then arises that if the Dravidians introduced the art of writing, when did they do it and why did they not use the clay tablets like the Babylonians as the writing material ? The Vedas were for a long time transmitted from generation to generation orally, and the advantage of recording the sacred literature in a permanent unforgettable and reliable form was not utilised. This is not difficult to answer. Firstly the Aryan conquerors were a haughty and arrogant people, and regarded their own institutions much superior to those of the conquered and in their pride disdained to borrow new-fangled ideas and preferred to adhere to their own system of recording their sacred literature by memory culture, which by cultivation through generations after generation, they had almost developed to perfection, as the Egyptian priests long after the knowledge of Demotic character and which was principally used for

private correspondence, and official and commercial transactions, still preferred the pictographs (hieroglyphics) for their sacred purposes. And the Dravidians themselves might not have found clay as a handy available material and they had to adapt themselves to local conditions. So they utilized palm leaves and for more permanent recording they used copper* silver and gold plates.† However clay was not entirely excluded, as we find a fine specimen of a brick tablet, discovered by Dr. Hoey, with a Buddhist Sutta inscribed on it.

Of course as to when and how the Dravidians brought the knowledge of writing from the Euphrates valley, either as they emmigrated or through the commercial intercourse, which was facilitated by the regular monsoon wind, can not yet be definitely answered. One thing is certain, we have not up to this time discovered any evidence testifying to the autochthonous development of writing. On the other hand in Egypt and Mesopotamia, the natural history of the alphabet, its birth, growth, infancy and development can be easily traced step by step. All alphabets in their final analysis might owe to the Egyptian and Accadian pictographs and hieroglyphics, with the possible exception perhaps of the Chinese ideographs and yet they show a very close resemblance.

Egyptian hieroglyphics were undecipherable and were shrouded in mystery until Napoleon's expedition in the land of the Nile awakened keen interest in France in its sacred treasures and a young imaginary officer, Boussard by name, found in the year 1799 near Rosetta in the

* A copper plate of Takk-sila, Epigraphia Indica, Vol. IV.

† The Maung-gon gold plate, Epigraphia Indica, Vol. V, p. 101.

suburb of Alexandria, a slab stone* inscribed in three languages, hieoglyphic, demotic and the Greek. Of course the Greek could be easily read, but the other two languages still retained their profound peace. And the door to the ancient Egyptian store house remained unlocked before the celebrated French archeologist Jean Francois Champollion. (1790-1832) found the key to solve the enigma of this strange picturesque epigraphy. He observed that there were cartouches or ovals round some pictographs and they appeared again and again and contained the same hieroglyphics ; he therefore rightly guessed they were the royal names of Ptolemy and Cleopatra which were in the Greek text. As the personal names can not be written by ideographs, the first sound of each picture was utilized as a phonetic alphabetic equivalent and it was the custom of the land to put the names of royalties in cartouches as distinction of honour. And knowing as he did the language of the Copts, the descendants of the ancient Egyptians and who retain more or less the purity of their blood and dialect, he could easily ascribe to their phonetic value. Cleopatra was written thus :—Quadraat for K ; the lion for L ; the reed for I or E ; the knotted cord for O ; the shutter for P ; the eagle for A ; the hand for T ; the mouth for R ; the eagle for A ; and the eggs stand as a determinative for the feminine sex. Ptolemy was inscribed as follows :—shutter for P ; a cap for T ; the knotted cord for O ; the lion for L ; the tongs for M ; the two reeds for Ai ; the crochet for S. It should be remembered that the primitive Chippewa Indians of Lake Superior in their petition to the Government of

* Now known as the Rosetta stone and is in the British Mnseum.

the United States of America in the year 1849 used clan-totems to designate the names of the petitioners. The whole petition consisted of a picture of the representative totems of the clans, held togother by strings and they are placed on striped band below which lay attached to the string four small fruit-like impressions. The totems, crane, martens, bear, man-fish and cat-fish, represented the chiefs of those clans and the string holding them together signified their unity of purpose and the striped band is the Lake Superior and the fruit-like prints are the islands to which they lay claim to settlement. Here as it can be easily seen, the power of expressibility is very elementary, crude and clumsy and is far behind the cultural needs, which in the fertile valley of the Nile, the Egyptians developed to an extraordinary degree, even in the remote and misty period of human history. Rosetta stone is also a petition and by the priests for re-dress and it runs as follows :—

"To king Ptolemy and queen Cleopatra his sister and queen Cleopatra his wife, gods Euergetae welfare. We, the priests of Isis, the very great goddess (worshipped) in Abaton and Philae, seeing that those who visit Philae—generals, chiefs, governors of districts in the Thebiad, royal scribes, chiefs of police and all other functionaries, as well as their soldiers and other attendants, oblige us to provide for them during their stay, the consequence of which is that the temple is impoverished and we run the risk of not having enough for the customary sacrifices and oblations offered for you and for your children, do therefore pray you, O great gods, if it seem right to you to order Numenius, your cousin and secretary to write to Lochus, your cousin and governor of the Thebiad, not

to disturb us in this manner and not to allow any other person to do so and to give us authority to this effect that we may put up a style with an inscription commemorating your beneficence toward us on this occasion, so that your gracious favour may be recorded for ever; which being done, we and the Temple of Isis shall be indebted to you for this among other favours. Hail."

"King Ptolemy and queen Cleopatra the sister and queen Cleopatra the wife, to Lochus our brother, greeting: Of the petition addressed to us by the priests of Isis in Abaton and Philae, we place a copy below, and you will do well to order that on no account they be molested in those matters which they have declared to us. Hail."

Not only ancient Egypt inscribed magnificently, in her temples, buried tombs and sarcophagi with the most solemn and picturesque effect, but she also wrote on papyrus rolls, which were manufactured by pressing the fibres of the papyrus plants which grew on the Nile and gleuing them together. Some of these papyrus rolls are very long and they can be seen in various museums of Europe. The Papyrus of Ani is 78 feet long, that of Nebseni of Thebes, 77 feet long and that of Nu is 65 feet long. In some of the papari, the writing is in pictographs in vertical registers, while in others in hieratic, a cursive abridged form of the hieroglyphics, from right to left, a kind of short hand writing. Part of the papyrus Hu-Nefer in primitive picture writing expresses this way :—Adoration of Ra, when he riseth in the horizon, eastern of heaven. Behold, Osiris, Hu-nefer, triumphant, he saith: Homage to thee, Ra in his rising: Temu in his setting. Thou risest, thou

shinest, diademed as the king of the gods. Thou art lord of heaven, lord of earth, maker of the beings of heaven and of the beings of the earth, God one who came into being in time primeval, maker of the world, creator of mankind, maker of the god Nu, creator of Hapi, creator of the watery abyss, making to live what is therein, binding fast the mountains, making to come into existence men and women."

The phonetic value in juxtaposition to the picto and ideographs has been transliterated in the following manner :—for a, eagle ; ah, reed ; e, arm ; ai, double reed ; u, chicken ; b, leg ; ch, shovel ; d, t, hand ; f, snail ; g, altar ; h, twisted loop ; k, cup ; kh, disk ; l, lion ; m, owl ; n, water waves ; p, shutter ; r, mouth ; s, crochet ; sh, tank ; t, cap ; th, looped cord ; z, cerastes.

Below is the translation of a part of the Papyrus Prisse in hieratic writing, about 2500 B. C. which is in the Bibliotheque National, Paris, and which is mentined to be copied from an original of 3350 B. C. It reads as follows : The advice of a father to his son :— "If thou hast become great, after thou hast been lowly, and if thou hast amassed riches, after poverty, so that thou hast become, because of this, the first in the city ; and if the people know thee on account of thy wealth and thou art become a mighty lord, let not thy heart be lighted up, because of thy riches, for the author of them is God. Despise not thy neighbor, who is as thou wast, but treat him as thine equal.....who shall make me to speak noble words ? How shall I tell him (my son) the words of those who have heard the wise counsels of olden times, the counsels which have been heard from the gods ?" The father mourns about

the good old times and yet he lived more than five thousand years ago.

The history of the cuneiform writing is similar to that of the hieroglyphics. Father Schiel's Sumerian votive tablet, as named after the discoverer, is perhaps the oldest specimen yet found of the art of picture writing. It is so archaic in its simple design, for these primitive drawings can by no means be called standardized alphabets, yet so expressive in its meaning. It has three vertical registers without any definite demarkation and consists of a jar on a stand, a star, throne, two trees on a canal, four musical instruments, pouring out the libations, a covered jar before an altar and a foot.

The Monuments Blau, named after the discoverer, are also Akkadian votive tablets in quaint and impressive pictographs. The Akkadians and the Sumerians were the same Turanian people and spoke the same language. Only those who lived in the northern mountainous region were called Akkadians, for Akkad meant in their language the mountains and those who lived between the rivers, were called Sumerians for *Sumer* in their language meant the river valley. When a branch of the savage Semitic race was attracted to the land for its fertility and wealth and conquered the Sumero-Akkadian race, the conquerers not only mixed with the conquered, but also borrowed their superior arts, crafts and culture and developed into what is known as the Assyrian and later the Babylonian civilisation. As the only writing material in the river valley was clay and it was impressed with a sharp-edged stylus, soon the pictographs were converted into cuneiforms as soon as they became conventionalized. This transitional stage of writing is exemplified in the Our-Nina brick

(about 4000 B. C.) which reads: Our-Nina, king of Shirpoula, son of Nini-hal-shin, the abode of Ghirson, he has constructed and in the fragment of the Entemena tablet (4500 B. C.).

Further standardization is noticed in the famous statue Gudea (now in Lovre), the priest-king (Patesi) who ruled Southern Babylonia about 3100 B. C. His front dress, arms and back are covered with exquisitely clear inscriptions in horizontal linear columns. It reads as follows :—

"In the temple of the god Nin-Girsu, his king the statue of Gudea, the Patesi of Shirpurla, who the temple of Enninu has constructed : 1 qa of the fermented liquor, 1 qa of food, half a qa of.....half a qa of.....such are the offerings which it institutes. As for the Patesi who shall revoke them, who the orders of the god Nin-girsu shall transgress, let the offerings instituted by him in the temple of the god be revoked. Let the commands of his mouth be annulled."

"To the god Nin-girsu, the powerful warrior of the god Ellila, Gudea the architect, the Patesi of Shirpurla, the shepherd chosen by the unchangeable will of the god Girsu, regarded with favourable eyes by the goddess Nina, dowered with power by the god Nindara, covered with renown by the goddess Bau, the offspring of the goddess Gutumdug, dowered with sovreignty and the sceptre supreme by the god Galalim, proclaimed afar among living creatures by the god Dunshaga, whose primacy has been firmly founded by the god Ningishzida, his god. After that god Ningursu had turned towards his city a favourable gaze (and) Gudea had chosen as the faithful shepherd of the country,

(and) among the divisions of men had established his power, then he purified the city and cleansed it; he has laid the foundation (of the temple) and deposited the foundation-cylinder. The adorers of the demons, the evokers of spirits, the necromancers, the phophetesses of divine decrees, he has banished from the city. Whoever has not departed obediently, has been expelled perforce by the warriors. The temple of the god Nin-girsu, in all respects in a pure place he has constructed. No tomb has been destroyed, no sepulchral urn has been broken, no son has ill-treated his mother. The minsters, the judges, the doctors, the chiefs, during the execution of the work have worn garments of.....during all the time (of its construction), in the cemetery of the city no ditch has been excavated; no corpse has been interred. No Kalu has performed his funeral music or uttered his lamentations. The female mourner has not caused her lamentations to be heard. On the territory of Shirpurla, a man at variance to the place of oath (court of Justice) has taken no one; a brigand has entered the house of no one. For the god Nin-girsu his king (Gudea) has made the dedicatory inscriptions; his temple Eninnu which illuminates the darkness, he has constructed and re-instated. In the interior his favourite Gigunu of cedar wood he has constructed for him. After that the temple of the god Nin-girsu he has constructed, the god Nin-girsu, the king beloved by him, from the sea of the Highlands (Elam) to the lower sea has forcefully opened (the roads) for him. In Amanaum, the mountain of cedars, (joists) of cedar, whose (length) was seventy spans, (and joists) of cedar, whose (length) was 50 spans, (and joists) of box whose length was 25 spans, he has caused to

be. cut ; from this mountain he has caused to be brought. The.....he has made. The.....he has made. The..... he has made. As for the cedar to form great gates, he has employed ; with brilliant ornament he has enriched them and in the temple Enninu he has placed them. In his sanctuary E-magh-ki-a-sig-de-da he has used as beans. Near the city of Ursu, in the mountains of Iblajoists of Zabunum trees, of great shaku trees, of talubum trees, of gin trees, he has caused to be cut ; in the temple of Enninu he has caused them to be used as beans. From Shamanum in the mountains of Menua, from Susalla, in the mountains of Martu, nagal stones he has caused to be brought ; in slabs he has caused them to be cut ; the Holy of Holies in the temple of Enninu he has constructed of them. From Tidanum in the mountains of Martu shirgal-ghabbia stones he was caused to be conveyed : in the form of urpadda he has caused them to be cut ; to (receive) the bars of the gates in the temple he has arranged them. From the country of Kagal-adda-ki in the mountains of Kimash he caused copper to be taken, to make the arm, from which one escapes not he has employed it. From the country of Melughgha kala trees he has imported ; he has caused to be made. From Kilzanim he has imported, to make the arm he has employed. Gold-dust from the mountain of Ghagum he has imported ; for the fabrication of the arm.....he has utilized it. Gold-dust from the mountain of Melughgha he has imported, to make Emartu he has employed it. Lidri he has imported. From the country of Gubin, the land of ghaluku trees, ghaluku wood he has imported ; to make pillars he has employed it. From the country of Madga in the mountains of the river Gurruda bitume (?)

he has imported ; the platform of the temple of Enninu he has constructed. Imghaum he has imported. From the mountains of Barsip nalua stones in large boats he has caused to be brought ; the foundation of the temple Enninu he has encircled with them. By arms the city of Anshan in the country of Elam he has conquered ; its spoils to the god Nin-girsu in the temple Enninu he has consecrated. Gudea, the Patesi of Shirpula after that the temple Enninu to the god Ningirsu he had constructed, has built an edifice : a pillared temple to Patesi for the god Nin-girsu had constructed ; he has constructed for him. He has written there his name ; he has made dedicatory inscriptions. The orders of the mouth of the god Nin-girsu he has faithfully executed. From the mountains of the country of Magan a hard stone he has imported. For him a statue he has caused it to be cut. "O my king, whose temple I have built, may life be my recompense." By this name he has named (the statue) and in the temple Enninu he has erected it. Gudea unto the statue has given command : "To the statue of my king speak." After that the temple Enninu his favourite temple I had constructed, I have remitted penalties ; I have given presents. During seven days obeisance has not been exacted ; the female slave has been made the equal of her mistress ; the male slave has been made the equal of his master. In my city the chief of his subjects has been made the equal. All that is evil from this temple I have removed. Over the commands of the goddess Nina and the god Nin-girsu I have carefully watched. A fault the rich man has not committed ; all that he has desired the strong man has not done. The house where there is no son, it is its daughter who new

offerings has consecrated ; for the statue of the god, before the mouth she has placed. Of this statue, neither in silver, nor in alabaster, nor in copper, nor in tin, nor in bronze, let any one undertake the execution. Let it be hard stone. Let a sacristy be established and of all that shall be brought there, let nothing be destroyed. The statue which is before thee, O god Nin-girsu, the statue of Gudea, the Patesi of Shirpula, who the temple Enninu of the god Nin-gursu has constructed, whosoever from the temple Enninu shall remove (or) its inscription shall efface.....may be become a man without a name. May his princely race be reduced to subjection. May this man like every man who has acted evilly towards his chief, afar under the vault of the heaven in no city whatsoever find a habitation. Of the champion of the gods, the lord Nin-girsu, the greatness, may the people proclaim."

This lengthy translation is here given to get a glimpse of the contemporaneous civilization. However in the inscription of Hammurabi (2250 B. C) stanardized linear Babylonian script is seen. It was a code of laws, differentiating between the intentional and non-intentional injury. It has been translated thus :—2. "If a physician open an abscess (in another's eye) with a bronze lancet and destroy his eye, he shall pay silver to the extent of onehalf of his price." But "if a man destroy the eye of another man, they shall destroy his eye." The original reads as follows :—Sum ma a-wi-lum, i-in--mar a-wilim, uhtab-bi-it i-in-su u-ha-ap-po-du.

The deciphering of the cuneiform has been facilitated by the fact that the rock inscription of Bahistum being trilingual, cuneiform old Persian, Medic and Babylonian and the Zend language being more or less known, it gave

clue to two other languages and revivified a long forgotten strange history and civilization. The Bahistan inscription was made by the order of Darius (522-486 B. C.) to glorify his new conquest.

The late Babylonian and the Assyrian cuneiforms were but the condensed and shortened form of the Sumerian and early Babylonian pictographs. And its use was very wide-spread and its prestige was universal, even in Egypt gradually supplanting the demotic writing. The scribes versed in cuneiform and the book-tablets in the same script, were everywhere. In the Tel-el-Amarna exploration nearly three hundred tablet letters have been found, addressed to Amenophis III from kings of Babylonia (Kardungyash), Assyria, Mesopotamia and subject princes and governors in Palestine and Canaan and all written in Babylonian cuneiform and language, except only in one, written by Dusratta or Tushratta king of Mitenni, whose daughter was married to Amenophis and which consisted of 512 lines of which 7 are in Babylonian and the rest in the strange and hitherto unknown language and script of Mitanni and it has been found impossible to decipher it yet. All this clearly indicates the wide-spread influence of the Babylonian culture and the use of its cuneiform syllabic signs which were nearly five hundred.

Though the invention of the alphabet has been a great advanced step over the primitive and cumbersome method of picto and ideography thus facilitating the cultural progress by quickly recording and transmitting to the next generation the experience of the age, on phonetic principle, yet Egypt and China accumulated a great literary treasure and tradition, on pictopraphic principle. Egypt had according to Salvolini 300 hieroglyphic and

34 alphabetic signs. Alphabetic signs also originated from pictorial symbols. Thus, L from *'lave* (lion) ; R from *'or'* (mouth) ; A from *'ahem'* (eagle) etc.

China still uses modified pictorial symbols and there is no alphabet in her word-formation, nor is there any conjugation, declension, inflection and termination in grammatical construction. Each sign represents an idea or an object. According to the tradition, Chinese writing was invented by the mythical emperor Hwang-le or Nak-hon-ti, a name almost indentical with the Susian deity Nak-hon-ti, and who is also mentioned in the same role of selecting for the art of writing, objects in the air, on the earth and in the world around and substituting these representations for the knotted cords, then in use. The zodiac symbols used by the Chinese and by the Assyrians as seen in the boundary pillar of Nebechandnessar (1150 B. C.) are also identical.

The Chinese writing signs consist of the symbols of the following object and ideas :—(1) *Hsiang hsing* re-present natural and artificial objects, as the heavenly bodies, man, animals, birds, trees, house, knife, cooking vessels, amounting to 600 characters of which 214 are radicals or keys like Egyptian determinatives. (2) *Chih shih* represent suggestive ideas, as the sun in the horizon is meant to convey the idea of the morning, the sun beneath a line, evening ; a mouth with a line in the middle indicates speech or eating ; several strokes of brush before a door, a crowd in the gateway ; a man in water means swimming and there are 107 characters of this nature. (3) *Huii* represent associative ideas as the sun and the moon indicate light, a mouth and a bird singing, a dog and a mouth barking, an axe and a tree cutting, a man on

a cliff danger, a hand and a woman safety, an ear at a door listening, two hands joined cordiality and there are 740 combined ideographic signs. (4) *Chuan chu* are indicative signs, as the extended right or left hands indicate right or left directions and there are 372 of them. (5) *Chia chieh* are metaphorical signs, as beauty is indicated by a woman or a bird, forgetfulness by a heart and death, love by a woman and a child and there are 600 of them. (6) *Hsieh sheng* are the final phonograms of the Chinese language, which amount to nearly 20,000 to 30000, the combination products of the picto and ideographs with necessary radicals and determinatives, (2219) to convey the exact meaning and of which the knowledge of 5000 to 6000 is essential to read or write an ordinary newspaper or for private or business correspondence.

In the transmission of the Chinese system of writing to the Japanese, there has been quite an adaptability, for the structure of the Japanese langauage is polysyllabic and quite unlike the Chinese which is monosyllabic. The consequence is that the Japanese only adopted those phonetic symbols which were necessary. The Japanese language as spoken in ordinary use, has only five vowel and fifteen consonant sounds and they can not combine in more than seventy-five sounds and a good many of them never occur, forty-five of these syllabic signs are all that is necessary to write any Japanese word and this abbreviated Chinese system of writing is known Ka-ta-ka-na. The other system used for Chinese classics, is known as Hi-ra-ka-na and is more complicated, containing nearly 300 signs and was derived from the cursive Chinese script.

It is among the Phœnicians, that we see for the first time alphabets, purely based on phonetic principle and to them the civilised world owes the art of writing excepting in China and Japan. In the monolythic sarcophagus of Eshmunazar II king of Sidon (400 B.C.) though the character is entirely well-formed phoenician, the design of the statue is Egyptian in all details, thus indicating the close relation to the Egyptians and the Phoenicians, if not also in their origin. The Mesha inscription (now in Louvre) is the oldest yet found of the Phœnician writing. It is of the ninth century B.C. The distinguished paleographists like Buhler and Weber find a very striking resemblance between the alphabets of this inscription and that of the Pepe vases of the Sakya tope. In the Moabite stone there are thirty-four sentences, written from right to left like the Arabic and the words are separated by dots and the sentences by short vertical lines (dhari) as in Sanscrit and Hindi languages. That the Sanscrit used to be written from left to right and the Phœnician from right to left is not of fundamental importance. For we know that the Greeks borrowed the alphabet from the Phœnicians, who according to Herodotus settled in Boetia and introduced the art of writing and for a long time even in Greece itself their alphabets were known as '*Phonikia grammata*,' that is, Phœnician letters. And in the beginning the Greeks used to write from right to left as is exemplified by the archaic inscriptions in the buried tombs of Thera and a little later alternately right to left and left to right and which they called '*Boustrophedon*' turning like oxen in plowing.

The Phœnicians were a trading people and were

the greatest navigators of their time. They sailed on every sea and established colonies and trading stations in every land known in those ancient days. However Phœnicia was not a powerful military state. It mainly consisted of prosperous city republics on the fringe of the rocky littoral of the Mediterranean and in stress of necessity they simply formed coalition for offensive and defensive purposes. Their wealth was due to their commerce. They were the carriers of merchandise of all nations. Their position is almost analogous to that of England for the last two or three centuries. Their power, prestige and wealth did not lie in conquests but in the monopoly of the vast and expansive empire of the sea which touched on every land. Arvad first grew in importance as a sea-port for exportation of the cereals of the fertile Hittite empire in exchange for the varied merchandise of Cyprus, Egypt and Asia Minor. But with the expansion of commerce Byblos became the first city of the Mediterranean. The origin of this holy city is shrouded in the mists of antiquity. The Assyrian name of it was Gubal, like the Arabic designation Djebail, which means the city of the mountainers and the Greeks called it Tripolis and which was vulgarised in later time as Tarabulos. Byblos is hoary and venerable with age. Its ancientness can be easily judged by the sanctity with which it was held by the Phœnicians. It was at Byblos the 'lady' Baalat reigned, the Goddess who gave birth to God Tammur, the Greek Adonis who dies and is reborn every year as the symbol of nature which is in perpetual process of death and re-birth. However hardly anything remains of its precious monuments which have been all destroyed by the fanatical Christian

priests, except the necropolis which was curved out in the solid rock.

But Byblos was found too small for the growing commerce. Then Beeroth (Beirut) the Beryte of the Greeks became the centre of the sea-borne trade. Beeroth (fountain) in its place also proved insufficient. Then grew the powerful Sidon (Seida) "The mother of Tyre and Arad" as one inscription said. And the daughter soon succeeded the mother, but she was called the Poleo-Tyr (Old Tyre) by the Greeks.

However like England Sidon and Tyre were but outposts of her vast maritime empire. Phœnicians colonised, fortified and established trading stations at every strategic point. Finding the importance of Bosphorus, they built a fortess on its shore and called it Kalta or Karta, the Kalkeodon of the Greeks and the modern Chalcedoine. In the centre of the Mediterranean they seized the island of Malta and on the favourable promontory built the city of Carthage, the true daughter of Tyre, who soon surpassed her mother in opulence, power and influence. On the Mediterranean littoral on the European side they founded many business centres, especially Mars-el (the God's port) due to its beautiful natural harbor and advantageous situation, the present Marseille.

The Phœnicians had also a large fleet on the Red Sea and they had not only opened ports on the Arabian and Persian coasts, but also on the Euphrates the Tigris (they were separated from each other in ancient time by nearly 30 miles and they have been but recently united owing to the retirement of the sea more than thirty two miles due to alluvial deposits), the Indus

(Abhira), Malabar coast (Musiris), Tambrapanni (Ceylon) and even up to Borneo where recently (at Rejang) many Phoenician inscriptions have been discovered, dating as far back as twenty three centuries. The intercourse of Phoenicia is more conclusive. There are orientalists who believe that Ophir mentioned in the Bible, meant India.* However if this is a controversial point, it is certain that when Solomon built his temple in the year 1014 B.C. he employed Phoenician navigator Hiram who brought for him 'ivory and apes and peacocks'.† Now not only these were indigenous to India, but the Hebrew names mentioned for them are decidedly Indian in origin. Thus the Hebrew word employed for ape is 'Koph' which is from Sanscrit 'kopi' ; for ivory 'harnoth-sheng' which is from Sanscrit 'ibha' ; for peacock 'tukhin' from Malyalam or Tamil 'tagai'.

The Phœnicians also circumnavigated the African coasts and established many stations, thus preceding Vasco de Gama by more than twenty centuries. On the other hand crossing the 'Gate of Hercules' (Streight of Gibraltar) they made a port of Gades (Cadiz) and ventured further into the 'dark sea' in search of tin which was in great demand at that time in Egypt, Assyria, Greece, Persia and India for making bronze to manufacture arms, vases and statuaries and which they found and mined in Devonshire and Cornwal in England. The ancient name of the tin, Assyrian 'Kasa-

* G. Oppert : Tharshish und Ophir, Zeitschrift fur Ethnolgie, 1903. Weber : Indische Skizzen.

† I. Kings X. 22.

zatirra' Greek 'kassiteros,' Arab 'gazdir' and Sanscrit 'kastira' have been all derived from the Phœnician 'Kasatira.' According to Reclus* the Phœnicians had the following trading stations :—1. Rhodes ; 2. Chalcedoine (on the Bosphorus) ; 3. Thasos (in the Greek archeplego for gold mines) ; 4. Malta ; 5. Sicily ; 6. Sardinia ; 7. Marseilles ; 8. Pityuses (Gibraltar) ; 9. Gadez (Cadiz) ; 10. Utica and Carthage ; 11. Cassiterite Islands (Scilly) and tin mines of Cornwall and Devonshire ; 12. On the coast of Ambre and Thule (Shetlands) ; 13. Promontory of Solœis (Cape Cantin in Maracco) ; 14. Cerne (Rio de Oro) and colonisation of Hanno ; 15. Sherbrook Sound (Sierra Leone about 600 B. C.) 16. Ezeongeber (Suez) ; 17. Cape of Aromates (Cape Guardifia) ; 18. Sofala and the interior gold mines (East Africa) ; 19. Periple de Nechao (South west Africa ?) ; 20. Tylos (on the Euphrites) ; 21. Bahrein (on the Arabian coast on the Persian Gulf) ; 22. IV. 18. Hadramaut (South Arabia after the name of the daring mariner who dared to navigate the Arabian Sea directly in order to come to the Malabar coast during the Monsoon instead of slow sailing through the coast) ; 23. Abhira (on the Indus) ; 24. Musiris (on the Southern Malabar Coast) ; 25. Rejang in Borneo.

Phœnicians had two kinds of letters, Sidonian and Tyrian, but they were but slight variations of the same characters. It is well known how the Roman letters have evolved out of the Greek alphabets. The word alphabet is after the Greeks first two characters, alpha

* Elisee Reclus : L'Homme et la Terre, Vol. II. P. 55.

and beta. Yet the Greek, Hebrew and the Arabic are not only less variants than the Greek and the Roman but they have almost the same identical alphabetic sound, and the phonetic value.

Phœnician alphabet with phonetic value :—Aleph (ah), beth (b), gimel (g), daleh (d), he (h), Vau (v), Zayin (z), cheth (ch), teth (t), yod (y), kaph (k), lamed (l), mem (m), nun (n), samekh (s), ayin (a), pe (p), tsade (ts), qoph (q), resh (r), shin (sh), and tau (t).

Greek :—Alph (ah), beta (b), gamma (g), delta (d), epsilon (e), zeta (z), eta (a), theta (th), iota (i), kappa (k), lambda (l), mu (m), nu (n), xi (ks), omicron (o), pi (p), rho (r), sigma (s), tau (t), upsilon (u), phi (f), chi (k), psi (ps), and omega (o).

Hebrew :—Aloph (ah), beth (b), gimel (g), daleh (d), he (h), vau (w), zayin (z), cheth (k), teth (t), yod (y), caph (k), lamedh (l), mem (m), nun (n), samekh (s), ayin (a), pe (p), sadhe (ts), qoph (q), resh (r), sin (s), shin (sh), and tav (t).

Arabic :—Alif (ah), ba (b), ta (t), tha (th), jim (j), ha (h), kha (kh), dal (d), ra (r), zay (z), sin (s), shin (sh), sad (s), dad (d), ta (t), za (z), ain (a), ghain (k), fa (f), qaf (q), kaf (k), lam (l), mim (m), nun (n), ha (h), waw (w), and ya (y).

Sanscrit :—A (like au in naughty), ah (as a in father), rhashya ee (short I as in thin), dheerga ee (long ee), rhashya u (short u as in German or Spanish U or French ou), dheergha u (long u), a (as a in animal), ai (as oi in oil), o (as o in note), ou (as ou in house) ri (as ri in Critian), rhi (as ri in Spanish rifar) anusvara (as ong in French ongle), bisharga (wa); Ka (k), kha (kh), ga (g), gha (gh), uma (as ng in French langue)

cha (as in Spanish ch or ch in church) sa (s), ja (j), jha (jh), nia (a variant of uma), *(dentales) ta (t), tha (th), da (d), dha (dh), na (n), tha (tha), tha (aspirita), dha (dha) dha (media aspirata), na (nasalis n variant), pa (p), pha (ph) ? ba (b), bha (bh), ma (m), ya (y), ra (r), la (l), wa (w), sa (s), sha (sh), sa (s), ha (h), ska (ska).

The Sanscrit character as it is known to-day, has been greatly modified. The word Sanscrit itself means purified. The vowels and the consonants have been separated. And it has attained a phonetic richness, which is almost amounting to perfection, and it was lacking in it, as we have showu in the Pepe vases in the Sakya tope. It is now well known and admitted that the numerical figures, 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, developed in India independently, out of the shortening of the cursive lines, which were used in primitive times and if it is known as the Arabic Numerals, it is because, it was introduced into Europe from the translation of an Arabic work of Al-Khowarazami, by Leonardo of Pisa in 1202 A.D. into Latin and from which Europe got its knowledge. But Al-Khowarzami, that is the native of Khwarazm (Khiva), surname of Abu Jafar Mohammed ben Musa, who wrote his famous book in the latter part of the ninth century, on arithmetic, that is the art of computing with figures known as Arabic notation, in which especially the value of 'sifr' (cipher that is zero) was emphasized, learnt and borrowed it from India where it was long known before him and developed out of astronomical calculation, and computation as well

* Dentales modificatee.

as the art of measurement (geometry) from sacrifical altars.*

*(1) In the Black Yajus Veda VII. 2. 11-20, in the horse sacrifice the number is invoked thus, clearly showing that the value of zero was tenfold to the number it was added :—

Vii. 2. 11.

To one hail ! To two hail ! To three hail ! To four hail !
To five hail ! To six hail ! To seven hail ! To eight hail !
To nine hail ! To ten hail ! To eleven hail ! To twelve hail !
To thirteen hail ! To fourteen hail ! To fifteen hail !
To sixteen hail ! To seventeen hail ! To eighteen hail !
To nineteen hail ! To twenty-nine hail ! To thirty-nine hail !
To forty-nine hail ! To fifty-nine hail ! To sixty-nine hail !
To seventy-nine hail ! To eighty-nine hail ! To ninety-nine hail !
To a hundred hail ! To two hundred hail ! To all hail !

Vii 2. 1. 3.

To two hail ! To four hail ! To six hail ! To eight hail !
To ten hail ! To twelve hail ! To fourteen hail ! To sixteen hail !
To eighteen hail ! To twenty hail ! To ninety-eight hail !
To a hundred hail ! To all hail !

Vii. 2. 15.

To five hail ! To ten hail ! To fifteen hail ! To twenty hail !
To ninety-five hail ! To a hundred hail ! To all hail !

Vii. 2. 17.

To ten hail ! To twenty hail ! To thirty hail ! To forty hail !
To fifty hail ! To sixty hail ! To seventy hail ! To eighty hail !
To ninety hail ! To a hundred hail ! To all hail !

Vii. 2 18.

To twenty hail ! To forty hail ! To sixty hail ! To eighty hail !
To a hundred hail ! To all hail !

Vii. 2. 19

To fifty hail ! To a hundred hail ! To two hundred hail !
To three hundred hail ! To four hundred hail !
To five hundred hail ! To six hundred hail !
To seven hundred hail ! To eight hundred hail !
To nine hundred hail ! To a thousand hail ! To all hail !

(I) Perhaps it was brought by the Indian embassy to Bagdad in 773 A. D. with the astronomical tables. The use of numerals in India is seen as far back as the third century B. C. as found in the Nana Ghat inscriptions.* In the cave inscriptions of the first century A. D. a further evolution of these numerals is seen.† And a little later Brahmi (divine) numerals similar to Devanagari (character of the gods) with zero is observed in the inscriptions and in the sixth century A.D. the Hindi Mathematicians wrote learned discourses showing the function IV. 20 and the utility of zero in arithmetical notations. The Greeks designated numerals by alphabetical signs. Thus alpha stood for I, beta for 2, gema for 3, iota for 10, rho for 100, sigma for 200, tau for 300, phi for 500, alpoa with a stroke behind for 1000, beta with a stroke behind for 1,000,000. The Roman numerals are well known,

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Vii. 2. 20.

To a hundred hail ! To a thousand hail ! To ten thousand hail !
To a hundred thousand hail ! To ten hundred thousand hail !
To ten million hail ! To a hundred million hail !
To a thousand million hail ! To a hundred thousand million hail !
To ten hundred thousand million hail ! To dawn hail !
To the dawning hail ! To him that will rise hail !
To the risen hail ! To heaven hail ! To the world hail !
To all hail !

From this it is manifest that not only the value of zero, but also multiplication, division and country a great number was known to the Vedic Rishis.

* E. C. Bayley : Journal Royal Asiatic Society 1882.

† Burnell : South Indian Paleography.

They used vertical strokes, I, II, III, for 1,2,3, like the Greeks before the time of Solon, and the rest by additions and substracticns and after the first letter of the number and thus C stood for centum (hundred), M for milli (thousand). The Phoenician numeral symbol were like the Egyptian hieroglyphics. Short vertical strokes upto 9 meant that number. Ten they designated by a pictograph of a bent finger, especially the thumb, which proves that number was in the beginning counted primarily on the finger ends, as it is even the custom among savages. For twenty they had two signs for bent finger and so up to ninety. For 100 they had a sign like a fishing hook. For 1,000 they had another symbol; for 100,000 a frog, for a million, a wonder or astonishment sign, a man with arms stretched out in admiration. The Arab numerals known as 'Ghobar' meaning sand, indicating perhaps that the sand-tablets were used for calculations, are very similar to the Bhami numerals of India. And as the Bhrami numeral is anterior to the Arabic by many centuries and both the numerals are very similar, it is logical to conclude that Arabia received them from India.

However it may be possible that India owes her system of division of time and value to foreign influences. For we, not only find day divided into sixty divisions (dhanda), and each 'dhanda' into sixty 'mahurtha' (moments) and each 'mahurtha' into sixty 'pals' and each 'pal' divided into sixty 'bipals', which was the Assysian custom, but we also find '*mina*' mentioned in Rig Veda* as a standard of value. Mina was an Assy-

* VIII. 67. 2.

rian coin, equivalent to 50 shekels of silver or gold. Among the Greeks 'mna' was worth 100 dracnmae. There is nothing astonishing in it. While the Aryan tribes were nomadic and pastoral in habits, the Egyptian and the Assyrian civilisations were already venerable and ancient.

We find that the Dravidians used decimal method. Thus in Tamil, the expression for twenty is '*iru-badu*' which virtually means two tens, from '*iru*' (two), '*patu*' (ten). But the division of the year was duodecimal and the year was divided into twelve months and the first month of the year was called 'Baisaka' after 'Brisha' (Taurus) as the sun was at the taurus in the vernal equinox which was in 4700 B.C. This was practically the Akkadian custom.

This Akkadian civilisation dates back to 7000 B. C. and is as old as Egypt, if not older. We have shown in the inscription of Gudea, the Sumerian Patesi, the power, influence, and culture of the race. The ancient capital of Akkad was called Ashar, Aushar or Ashur, meaning watered plain. When Saragon I (3800 B.C.) the Assyrian chieftain and warrior conquered the Akkadians, he removed the capital to Agame or Agade. Nineveh (the Mighty) was yet unknown and was but an insignificant collection of fishermen's primitive huts on the swift-flowing Tigris. But the Assyrians regarded the Akkadians with great respect, and borrowed culture from them as did in much later time the Romans from the Greeks. They studied their language as a classic, as we study Sanskrit. In the Ninevite remains we find that Saragon established one of his greatest libraries at Agade, and it consisted primarily

of famous Akkadian and Sumerian works with translation in Assyrian. The works were inscribed on clay tablets, the translation being either in the alternate line or the original in one column and the translation in the opposite column. And to facilitate learning vocabularies were compiled giving the Akkadian word and its equivalent in the Assyrian. A great prominence was given to an astronomical work, known as 'The observations of Bel' which consisted of seventy two books. Berossus the priest astonomer of Bel at Babylon translated this great ancient masterpiece into Greek in 250 B.C. and compiled also in three books the history of his country with documentary evidence. Unfortunately they are all lost now except a few extracts, quoted by Josephus and Eusebius. Another interesting compilation was a collection of the sacred books of the Sumerians in two hundred tablets. It not only contained the magic formulas and incantations but also their religious outlook of life and philosophical speculations. It should be remembered that the Accadians had Ziggurates, the temple observatories for astronomical observations and astrological studies. And the fame of Chaldean wisdom and power of divination was far and wide and lasted for a long time. The Sumerians had also seminaries for priests and seats of learning for scribes and magnificent libraries as at Erech which means 'City of Books.'

In one of his proclamation inscription Saragon the great patron of learning, father of 'Naram-Sin, king of four races, conqueror of Apirak and Magan and king of Four Regions,' says :—

"Forty-five years the kingdom I have ruled and the black Akkadian race I have governed. In multitude of

bronze chariots I rode over rugged lands. Three times to the coast of the Persian sea I advanced. The countries of the Sea of the setting sun I crossed. In the third year of the setting sun my hand conquered. Under one command, I caused them to be only fixed."

Here he calls the Accadians black. We have shown before that the Akkadians and the Dravidians were the same people belonging to the Turanian race.

The question is now whether the Dravidians brought with them the rudiments of alphabet from their Akkadian home and developed them independently in India or learnt from the Phœnicians at a much later period ?

The only alphabet used in northern India, similar to that of the Iranians was Kharoshti. It was introduced into India by the 'Darius' conquest and was partly modified by local environment. It is a very similar to that used by Darius the Great in his famous and magnificent inscription at Bahistun in which he says :—"I am Darieiros, the great king, the king of kings, the king of Iran, the king of nations. There are eight of my races who have been kings before me. I am the ninth. In a double line we have been kings." It was the script during the Achemenes dynasty as it is testified by the inscriptions of Persepolis. It was derivative of the Babylonian cuneiform. We find that only in the Asoka Edict of Kapur di giri. But at that time, Brahmi lipi was well known, as we see in the inscription of the vases of the Sakya tope, which is much older and which reads :—"I (ya)m sal (i) lanidhane Budhasa bh(a)g(a\v (a)te sak (iya)n(a)m Sukitibh(a)—tin (a)m s(a)bh(a)ginik (a)n(a)m s(a) put (a)d(a)l(a)n(a)m." (This casket of

relics of blessed Buddha is the pious foundation of the Sakayas, their brothers and their sisters together with their children and wives).

This old Iranian cuneiform script was replaced by Greek with the conquest of the country by Alexander about 334 B. C. But with the overthrow of the Hellenic supremacy by the Arsachids, the Pahlevi script was introduced and under the Sassanian kings, it became the official script and language. Pahlevi was the Persian form of expression for 'Parthavi' the language of the Parthivans (Parthians). According to tradition it is said that there was an original copy of Avesta (Divine Law) in a Median character invented by Spitama (the most beneficent) Zarathustra (Zoroaster) himself, written on twelve thousand cow-hides with a golden ink and bound together by heavy gold-bands and this was destroyed with the burning of the palace of Persepolis and which was set on fire by Alexander in a frenzy of zealousy by an act of one of his mistresses. Whatever fragments of the various nosks were in the hands of the Mazdean priests, and thus escaped the ravages of Iskander (Alexander) or were preserved by oral tradition, were gathered together under the patronage of king Vologases the last of the Arascids about 225 A. D. According to a proclamation ascribed to Khosrab Anosharvan (531-579) the compilation of the remnants of the Avesta was undertaken by the order of the last king of the Arsacides Vologases (Valkash) and was finished under Shapur II. (309-380). However the first Sassanian king Ardeshir Babagan raised the Mazdean Church from the humiliating position into which the Greek invasion had

made it sink and made it again the state religion. But it was Adarbad Muraspand who revised the Avesta and Shapur (309-380) issued a proclamation thus:—"Now that we have recognised the Law of the world here below, they shall not allow the infidelity of any one whatever, as I shall try that it may be so."

The text was written in original Avestan language, very akin to Vedic Sanscrit, both having originated from the same ancestral speech, but in Pahlevi script. The commentaries of the text, however were both in Pahlevi language and character. What is known as the Zend alphabet was the further evolution of the Pahlevi letters, and not the Avestan script it might have been originally written in.

Even in the Avestan text there are evident interpolations, as the two following quotations will show: one showing the pathos and misery of the slavery, which must have been experienced under the Greek domination and another polemic against the teaching of Buddhism, which was making headway in Iran and was supplanting Zorasteranism and the Buddhists were called Ashemaoga (disciples or followers of Sakya Muni).

"O Maker of the material world, thou Holy One, which is the fifth place where the Earth feels sorest grief? Ahura Mazda answered: It is the place whereon the wife and children of one of the faithful, O Spitama Zarathustra, are driven along the way of captivity, the dry, the dusty way and lift up a voice of wailing." Vendidad III. II.

"Verily I say unto thee, O Spitama Zarathustra, the man who has a wife is far above him who begets no

sons ; he who keeps a house is far above him who has none ; he who has riches is far above him who has none. And of two men, he who fills himself with meat, is filled with good spirit much more than he who does not do so; the later is all but dead; the former is above him by the worth of an '*asperana*' (a dirhem), by the worth of a sheep, by the worth of an ox, by the worth of a man. It is this man that can strive against the onsets of 'asto-vidhotu' ; that can strive against the self-moving arrow ; that can strive against the winter fiend, with thinnest garment on ; that can strive against the wicked tyrant and smite him on the head ; it is this man that can strive against the ungodly Ashemaogha who does not eat." Vendidad IV. 47-49.

"How many are the sins that men commit and that being committed and not confessed, nor atoned for, make their committer a Peshotanu ? Ahura Mazda answered : There are five such sins, O holy Zarathustra. It is the first of the sins men commit when a man teaches one of the faithful a foreign, wrong creed, a foreign, wrong law." Vendidad XV. 1-2.

"Who was the first Priest, the first Warrior, the first Plowgher of the ground ; who first took the turning of the wheel from the hands of the Daeva." Farvardin Yast XXIV. 89.

"'Turning of the wheel' means the wheel of sovereignty, a typical Buddhist expression."

Pahlevi was a cursive script, evolved out of the Aramean, a short hand commercial writing then prevalent in Mesopotamia, a daughter of the Phoenician.

Kharosthi, a script of commercial intercourse in Northern India (Gandhara), Bactria, and Khotan Daria

also was derived from Aramean and was modified to Sanskrit phonetics. It was possibly introduced by the Achæmenian conquest of Gandhara in the fifth century B. C. According to the Buddhist tradition, Kharosthi was invented by a man named Kharostha (Ass-lip). But there are others who think that it might have been simply the transliteration of the Aramic '*haruttha*' = engraving, writing.

The history of Brahmi-lipi has a more ancient history. Panini (350 B. C.) the celebrated grammarian mentions '*yavanāni*' the writing of the Yavanas (Ioneans), thus indicating that in his time the people not only knew the art of writing, but also the scripts of distant countries. '*Panini's*' '*Dhātupātha*' gives for the verb 'likh' the meaning 'aks´aravinyāsa' = arranging letters or syllables, which proves unmistakably that the Buddhistic and Jaina Pali sacred Books are much older, where the expression 'likham chindati' = scratches writing, is used and the word 'akkhara' means 'indelible' which can not be effaced, that is, scratched on the palm-leaf, wooden board or clay tablet.

In the Vinaya Pitaka it is found that if one 'cuts' (chindati) an inscription (lekham) to this effect, '*He who dies in this manner, will obtain wealth, or will obtain fame, or will go to heaven*,' (the cutter) is guilty of a Dukkata (dushkritá) sin for each single letter (akkharakkharāya). (If any body) sees the inscription and forms the painful resolution to die, (the engraver will be guilty) of a Thullaccaya (sthulātyay) sin; (in case the reader actually) dies, (the engraver will be guilty) of a Parajika offence.'

In the Katahaka Jataka there is an amusing story,

how a slave forging a letter of his master, married the daughter of his friend and came in possession of wealth :

"He (Katahaka) who performed in the Sheth's house the work of a store-keeper thought, 'These people shan't make me always do the work of a store-keeper and treat me as a slave, striking, imprisoning and branding me, if they find fault with me. In a neighbouring kingdom there is a Sheth, friend of our Sheth. If I take him a letter (lekh) written in our Sheth's name, and if I go to him and say that I am the Sheth's son, I may deceive him, obtain his daughter and live comfortably.' He himself took a leaf (panna), wrote as follows, 'I have sent my son N. N. to thee ; mutual connection by marriage is suitable for us ; give, therefore, thy daughter to this boy and let him live there ; when I have time, I will also come,' and he sealed the letter with the Sheth's seal. Then he took money for the journey, perfumes, clothes and so forth according to his pleasure, travelled to the neighbouring kingdom and stood before the Sheth there, respectfully saluting him. Then the Sheth asked him, 'Friend, whence hast thou come ? 'From Benares.' 'Whose son art thou ?' 'The Benares Sheth's.' 'For what purpose hast thou come ?' Thereupon Katahaka handed over the letter, saying, 'You will know it when you have read this.' The Sheth read the letter, and exclaiming, 'Now I live indeed !' he gave him joyfully his daughter and established him there."*

* Fausböll : Jatakas, Vol. I. P. 451.

It certainly must have taken centuries, if not longer to make the writing so popular that even a slave knew the art of writing. It is mentioned in the Lalitavistara that when young Shidartha, the future Buddha, went to the Brahman school-master Visvamitra 'with a golden pencil and tablet (phalaka) of red sandal wood' he learnt at once the sixty-four alphabets of which are enumerated at least three of the characters of 'the writing of the Dravidian country'. As Lalitavistara was translated into Chinese in 308 A.D. the book could not have been composed later than the third century A.D. How many centuries must it have taken to develop an independent character of the deviation of the Brahmi-lipi? In the Asoka edicts and inscriptions, the scripts are so varied and especially in the Bhattiprolu relic caskets, the deviations are so great as to form almost independent alphabets, that it indisputably proves the great antiquity of the Brahmi-lipi.

In the Kautiliya-Arthas'astra, which is attributed to Vishnugupta who is better known to the public as Chānakya and who according to the tradition overthrew the Nanda dynasty and placed Chandragupta on the throne which is about 321 B.C., the entire tenth chapter of the second book is devoted to 'The procedure of forming Royal Writs'. And in this we find the following instructions :

"(Teachers) say that '*s'āsana*', command (is applicable only to) royal writs (sāsana). Writs are of great importance to kings inasmuch as treaties and ultimata leading to war depend upon writs. Hence one who is possessed of ministerial qualifications, acquainted with all kinds of customs, smart in composition, good in legible

writing and sharp in reading shall be appointed as a writer (lekhaka).....Arrangement of subject-matter (arthakrama), relevancy (sambandha), completeness, sweetness, dignity and lucidity are the necessary qualities of a writ. The act of mentioning facts in the order of their importance is arrangement. When subsequent facts are not contradictory to facts just or previously mentioned and so on till the completion of the letter, it is termed relevancy. Avoidance of redundancy or deficiency in words or letters ; impressive description of subject matter by citing reasons, examples and illustrations ; and the use of appropriate and suitably strong words (asṛāntapada) is completeness. The description in exquisite style of a good purpose with a pleasing effect is sweetness. The use of words other than colloquial (agramya) is dignity. The use of well-known words is lucidity. The alphabetical letters beginning with Akāra are sixty-three."

To develop 63 alphabets out of crude and primitive Phœnician 22 characters must have a long antecendent history, requiring service of generations of master grammarians and phœniticists. Phonetically the Sanskrit letter is almost perfect. The following is the catalogue of the Sanskrit character which has been derived from the Brahmi and enclosed within the bracket are those which are not found in the Phœnician.

Ten simple vowels : a, (ā), (i), (ī), (u), (ū), (r'), (r'), (l), (l').

Four diphthongs : ē, (āi), (ō), (ōu).

Thirty-three consonants :

guttural : k, kha, g, gh, (ñ) ;
palatal : c, (ch), j, (jh), (n') ;
lingual : (t), th, (d), dh, n ;
dental : (t), (th), (d), (dh), (ñ ;
labial : p, (ph), b, (bh), m ;

Four semi-vowels : y, r, l, v ;

Three sibilants : palatal ś, lingual (sh) and dental (s) ;

A soft aspirate : h ;

Spirat : visharga ;

Nasal sounds : anusvaram, Jivhamulam ;

Yamas that is consonantal combinations

Spirat : Visharga.

Nasal : Anusvaram.

Yamas = consonantal diphthongs as gñ, ksh, ñc, etc.

Of these the long vowels as ī, ū, diphthongs and ñ are not met with in Brahmi script and are later developments.

By comparative paleographic study of the ancient Phœnician of the Mesa-tablet period and earliest specimen of Brahmi-lipi, Bühler finds a very striking resemblance between many of the characters and others he thinks are but derivatives and adaptations to meet the phonetic requirements of the Arya-bhasha, and he concludes that 'the introduction of the prototypes of the Brahma letters (into India) lies between the beginning of the ninth century and the middle of the eighth, or about 800 B. C.' And 'as the Brāhma 'ha' goes back to a form of He, which is not found in the Phœni-

cian alphabet, but occurs on the Assrians weights, where also a *'Taw'* very similar to the Brāhma *'ta'* is found, the conjecture seems not altogether improbable that the Semetic alphabet may have come to India through Mesopatamia.*

Recent researches prove that Phoenician was but a short-hand, a synthetic commercial script of the Egyptian demotic and the Babylonian lineal. The learned Orientalist in plate III, has graphically illustrated the intimate correspondence between the Egyptian and the Brahmi numerals. As the Phoenician character has derived from the Egyptian as the very names of the alphabets clearly indicate, it seems more plausible that both the Phœnician and the Brahmi developed from the same parent stock. In the Teel-el Amarna find there are numerous tablets written in a strange script by Dasratha king of Mitanni to his daughter Gilukhipa, married to Pharaoh Amenophis or Amenhotep III (about 1410 B.C.). The Mitanni-Hittite treaty clearly indicates that Mitanni was a powerful kingdom. And we have shown that the Bharata tribes reached India from that source through Dvarakapuri between the fourteenth to twelfth century B. C. Is it not therefore reasonable to believe that they brought with them the proto-Brahmalipi, which was developed later in India to its fulness and perfection? The Mitanni Aryas were in close touch with the Egyptians, Assyrians and Babylonians. So in their script entered all these elements to express fully their rich and vibrant speech.

* Georg Bühler: On the origin of the Indian Brahma alphabet, P. 84.

In the Egyptian language the ox was called 'aleph' but only the head of it was represented to express it in later hieroglyphics, as an abbreviated form. The Phœnician first alphabet '*Aleph*' is but the cursory form of the Egyptian 'aleph' to express the phonetic value of 'a'. So for the eye='ain'; the human head='resch'; picket='waw'; water='mem'; the hand='Jod'; serpent='nahash'; fish='nim'; etc. Thus the origin of the majority of the Phoenician alphabets can be directly traced to the Egyptian hieroglyphic signs to represent the almost identical phonetic values.*

The deviations of the Brahmi-lipi as seen in the Dravidi of the Bhattiporlu inscription (about 200 B.C.) gradually formed into independent characters especially into early northern and southern types.

The Nagari character developed from the northern variety about 8th century A. D. and spread over northern India and Dekhan.

The Bengali sprang up from the Gupta-character which was the official script of the Gupta-empire of Magadha, a variation of the Brahmi-lipi, about eleventh century A. D. Kathi, Uriya, Assamese have the same origin.

The Gujrati deviated from the early Southern and the Kanarese and Telengu branched off from the same source about the fifth century with adaptation to palm-leaf use.

The Tamil developed independent characteristic about seventh century from the Bhattiprolu variation.

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* Journal Asiatique, Jan-March, 1921, P. 124.

The writing materials have been varied according to the needs. For permanent records, gold, silver and copper plates have been used for engraving, as well as inscriptions on statuaries and monuments. However, for every day general use wooden board was the common practice. But in the south palm-leaf and in the North birch-bark came into public favour and were used for all purposes, as they were cheap, abundant and easy to handle.

The use of ink was known as early as the fifth century B.C. It was made of finely powdered charcoal mixed with gum-arabic and water and it was applied on the writing material with a pen made out of wood or reed as available. In the South palm-leaves were written on with a metalic stylus and then the ink was besmeared on them and wiped out with a piece of cloth. It seems the writing materials were introduced in India by the Greeks, as their designations betray them to be of Greek origin : 'Kalama'=reed to write with (Gk. kolamos) ; 'Masi'=ink (Gk. melan=black) ; 'pustaka' =book (Gk. pyzion—tablets to write upon) ; 'pitaka'= tablet (Gk. pittakron) ; 'phalaka'=a wooden slab for writing or painting (Gk. plakos).

However teaching continued for centuries to be oral as the time-honoured fashion.

VI.

Caste.

When two distinct races are thrown together and one feels the superiority over the other and if they are separated from each other by the barrier of language and religion, the development of caste is the inevitable consequence.

And of all races the Aryans were a haughty, proud and exclusive people. Whatever may be the etymology of Arya, a term by which the Aryans in India designated themselves in contrast to the autochthonous inhabitants of the country whom they called Dasyus, there is hardly any doubt that by Arya they meant a noble and honourable epithet. Perhaps the word Arya is deprived from the root 'arare' meaning 'one who plows or tills.' The great veneration with which the Iranians and the Aryas held the cows, clearly indicates that the eastern Aryans had already given up nomadic life and had adopted pastoral existence. The cow is essentially unsuited to nomadic pursuits. It cannot run fast like horses and consequently can be easily captured by the enemy. It can not bear the hardship of barren water-less sandy wastes like camels. The cow is truly a domestic animal. She needs constant attention, rich meadows and plenty of water. She was regarded so sacred by the Iranians that they used her urine (Gomez) as a purifying agent to drive out the demons (Drugs)*

The Aryas made an early distinction between themselves and the non-Aryans, which is clearly explained

* Farg. VIII. 35-72 ; IX. 12-36.

by the following hymn in the Rig-Veda, 1. 57. 8. "Know the Aryas, O Indra and they who are Dasyus ; punish the lawless and deliver them unto thy servant ! Be thou the mighty helper of the worshippers and I will praise all these thy deeds at the festivals." The Iranians were no less proud than the Aryas in India. In the Zend Avesta we find repeated prayers for the welfare of all the Aryan people, "the whole space of Aria (vispem airyo-sayanem) and their heaven was in 'Airyanem vaejo, Airianum semen' where the Aryans originated. Darius proudly inscribes his name on the Bahistan rock as 'Ariya' and 'Ariya-chitra' (Aryan and of Aryan descent) and Ahuramazda (Asura Varuna) the god of the Aryans. His great-grandfather called himself Ariyaramna (Arya Ramana=the ornament of the Aryans), Ariaramnes of the Greeks. (Herod. VII. 90). Strabo in his geography (XV. 2) calls the entire territory between the Indian Ocean in the south and the Indus in the east, the Hindukush and the Paropamisus in the north, the Caspian gates, Karamania and the mouth of the Persian gulf in the west under the generic designation Ariana (Sk. Aryabharta) and Bactria was the ornament of the whole of Ariana (XI. 12). Herodotus mentions that the Medians took pride in calling themselves 'Arii' (VII. 62). In Zenda-Avesta the non-Aryan countries are called '*anairyao dainhavo*' and the Sassanian inscribed themselves as kings of '*Iran va Aniran*' ; in Greek '*Arianon kai Anarianon*' which is equivalent in sanskrit to '*Aryas and Anaryas = Aryans and Non-Arayans.*'

The antipathy of the Aryas against the Dasyus was terribly intense. They belonged to an entirely

different race of repulsive looks, dark complexion and flat nose, spoke a difierent language and worshipped different gods and contested fiercely the Aryan encroachments. There was nothing in common between them but fierce passion and bitter hatred. Racial animosity seems to be inborn in man. The Greeks distrust and hate the Italians, the Italians the French, the French the Germans, the Germans the English, the English regard themselves superior to all continental peoples and enjoy playing one power against the other which they pay back with venomous resentment and corrosive jealousy, the whole of Europe with burning heart feels hatred against America (U.S.A.) as an arrogant, unmannerly, barbarous opulent, and powerful country, full of passions, and America looks down upon all of them with contemptuous disdain. Yet they have prejudices, horrible crimes, vices, graft, greed and hypocrisy sprung from the same Caucasian stock, profess the same religion, have almost the same standard of civilisation and speak kindred languages. Individual greed, lawlessness and crime are controllable by religious injunctions and civic discipline, but when it expresses itself as a tribal or national will, the very solidarity of the social and national organisation seems, instead of checking it in its infancy, rather intensified and inflamed with violent fury. A Jew might renounce his religion and solemnly adopt a country into which he is born and whose language he learns to speak, yet there is an aloofness, reserve and distrust between him and the country which nothing can obliterate, even though on occasions he may be entrusted with honourable and responsible post for political purposes. The

Negroes in U. S. A. speak the English language, are zealous Christians, have cheerfully submitted to the domination of their white master, are docile and industrious people and whose labour is indispensable for the development of the South, yet there is a racial prejudice that is virulent and it is more hazardous to trespass and to cross the invisible 'color-line' than to break the rigid and fast rules of the Hindu caste.

But the Vedic Aryas had to wage a long, continuous and sanguinary war, lasting for centuries if not longer against the natives of the soil who were of different race, religion and language and who resisted with indomitable energy and resourcefulness every advance of the invader before they resigned to the inevitable and accepted the Aryan supremacy. Necessarily there was class distinction, the Arya and the Dasyu—the noble and the slave. There could be no intermingling between them on equal basis. War is savagery—licensed acrimony, robbery, rapine, rape and murder. It was no less so in ancient time than to-day. Here is the development of caste in its embryonic state. Thus the Vedic Rishi invokes the aid of Indra for destroying the Dasyus or capturing them as slaves with the raging passion in his heart :—

"Indra and Soma, burn the devils (Dasyus), destroy them, throw them down, ye two Bulls, the people that grow in darkness ! Hew down the mad men, suffocate them, kill them ; hurl them away and slay the voracious. Indra and Soma, together against the cursing demon ! May he burn and hiss like an oblation in the fire ! Put your everlasting hatred upon the villain who hates the Brahman, who eats (raw) flesh, whose look

is abominable. Indra and Soma, hurl the evil-doer into the pit, even unto the unfathomable darkness. May your strength be full of wrath to hold out that no one may come out again.

Indra protected in battle the Aryan worshipper, he subdued the lawless for Manu, he conquered the black skin." R. V. I. 130. 8.

"Indra gave horses, Indra gave the sun, he gave the earth with food for many, he gave gold and he gave wealth; destroying the Dasyus, Indra protected the Aryan colour (Arya-varna)." R. V. III. 39. 9.

But however the Dasyus might have been despised, the Aryas were not united among themselves and before long some of the Aryan chieftains found it expedient to make alliance with them. The reason is not far to seek. The Aryas reached India through different waves of invasions, lasting for centuries and the new-comers had often to fight their way through especially like the Bharata tribes who came from Mesopotamia and were a mixed people and spoke the language a little differently, and the old settlers did not give up their possessions or make room for them without stubborn resistance. So as a policy of defence, they made a common cause with the partially Aryanised native chiefs to ward off new invasions.

Divodaso, the chief of the most ancient and powerful Vedic Tritsu clan with the assistance of Purukutsa (Kutsa of the Puru tribe) an Aryanised Dravidian chief, defeated the Yadu-Turvasu (Bharata clans). (R. V. VII. 19). The Purus are often mentioned in the Rig Veda as firm allies of the Aryas. Purukutsa as an ally of Divodasa even fought against another power-

ful Dravidian chief Shambara, who built many wooden forts and they were put to flame. "From fear of thee (Agni) the black people fled ; they dispersed, leaving behind their goods and chattels, when thou, Agni, blazing for the Puru, didst destroy their forts." VII. 6. 3. "Thou Indra didst destroy the seven forts, fighting for Purukutsa, O Lord of lightning ; thou didst throw them like straw, before Sudas and help the Puru out of their streights." (I. 63. 7). This indicates that Purukutsa continued to be an ally of Sudas, son and successor of Divodaso.

However this friendship did not last long. Purukutsa joined the confederacy of the Bharata tribes, consisting of ten kings. Sudas in desperation begged and received the help of Prithu (Parthians), VII. 83. 1. Parsu (Persians), VIII. 6. 46 ; X. 33. 2 ; X. 86. 23. Shiva-Vishanin (Dravidian chief, follower of Shiva). The Confederate army crossed the Shatadru (Sutlej) and Vipash (Bias) and advanced forward to attack the army of Sudas which was on the other side of Purushni (Ravi). The fording of the rivers was celebrated by this beautiful piece of poem in the dialogue form :

"Down from the mountains, in merry race, like two mares let loose or two comely mother-kine at play, Vipash and Shatadru run along, carrying their milk-like waters. Spurred on by Indra like swift charioteers, ye hasten to the mighty mass of waters ; with swelling waves ye beautiful ones run close to one another. I went down to the most motherly of streams, to Vipash, the wide, the fair,—to the two that like a pair of mother-kine fondling their calves, wander along to meet in one broad bosom.

'Swelling with sweet waters, travelling along towards the god-created bosom, nought can stem our swift current: what is the wish of the bard, that he calls to us rivers?'

'Hark to my devout song and stay your course for a brief rest, ye holy ones; to you rivers calls my heart's loud prayer; with longing I call out to you—I the son of Kushika.'

'He whose arm bears the lightning—Indra, broke the way for us, killing Vritra who shut in the waters; the beautious Savitar, the god, guides us on; following his lead, we spread our waters wide.'

'This heroic deed be praised for evermore, that Indra did when he cut the Serpent into pieces; with his lightning he struck the robbers; the waters sped away whither they longed to go.'

'Forget never, O bard, this word of thine; let the latest generation hearken to it; give us a long word in thy songs, O poet, let us not be forgotten of men, and honour shall be paid to thee.'

'Hear then, sisters, what the poet says: I came to you from far with loaded wagons; now bend ye low, give me an easy ford; let not your waves touch my axle-wood, O Rivers.'

'We will heed thy word, O Rish that cam'st to us from far with loaded wagons; I bend low before thee as a willing slave, as to her lord submits the bride.'

'But when the Bharatas' hosts, animated by Indra and full of ardour, has quickly forded thee, then let the current shoot up again with arrow's fleetness; this is the boon I beg of you, ye holy ones. The Bharatas filled with the ardour of battle, have crossed; the bard

did win the Rivers' favour : now swell, now grow rapidly to end the work and hasten onwards with well-filled beds. "R. V. III. 33. 1-12.

Emboldened by this success the Confederate army again attempted to cross the river Purushni (Ravi). Here the river was coquetish and fickle. Before half the army could reach the northern shore, the river swelled and became turbulent. Many were swept by the flood-current and were drowned. Those who had reached the northern bank met their terrible end from the well-equipped army of Sudas and his allies. The victory was complete for the Tritsus and their poet sarcastically sang of the Bharatas' hordes fording the river, 'thinking, fools as they were, to cross as easily as on dry land'. The Tritsus advanced as far as Saraswati (R. V. VII. 18).

In this war between the kindred Aryas, both sides took the help of the Dasyus, as is amply attested in the Rig-Veda :—

"He whom both battle lines call upon in the fray, both adverseries on this side and on that,—he whom they invoke, standing on chariots,—that, O men, is Indra" (R. V. II. 12. 8)

".....The warriors who leagued against us, whether kindred or strange, break their might." (VI. 25. 3).

"Thou Indra, dost strike both foes, the Aryan and the Dasyus." VI. 33. 3. "They (Indra and Agni) strike the foes, both Aryan and Dasa". VI. (60. 6).

"Whatever contemners of the gods, be they Dasa, be they Arya, battle against us, give us an easy victory over them, thy foes". (X. 38. 3).

"Thou (Agni) didst take the goods of mount and plain and didst strike the foes, both Aryas and Dasyus." (X. 69. 6.)

During this tragic war we see also the well developed class system. Visvamitra was the family priest (purahita) of King Sudas and he conducted the royal sacrifices. For the Rishi's sake, Indra was very favorable to him. (III. 53). But due to rivalry of Vasista who was winning favour of the king, Visvamitra forsook Sudas and went to the side of the Bharatas and he became their Purahita. And the Purahitas have been able to impress on the public mind that they were the intermediaries between gods and men. We do not know yet exactly how far the Vedas were the compositions of lay men or of well-trained hereditary priestly class. For the Rig-veda is a collection of hymns of only a few Rishi families and there are in them magic expressions of mystic import and of exegetic nature. Of course there is no rigid caste formation yet; but it was in the formative state. People could yet change their profession as we find in this well-known hymn:

"We men have all our various fancies and designs. The carpenter seeks something that is broken, the medicine-man a patient, the priest somebody who will sacrifice. The smith, with well-dried wood, with anvil and with feather fan, to cultivate the flame, seeks after a man with plenty of gold. I am a poet, my father is a medicine-man, my mother is a grinder of corn. With our different views seeking for gain we run (after our respective objects) as after cattle." IX. 112. 1-3.

Of course like the above, some odd pieces have

entered into the Rig-veda, especially in the tenth Mandala which is the latest collection. However it seems certain and Rig-veda is brimful of evidences that the priestly class was already exerting a tremendous influence. The priests arrogated to themselves the semi-divine rights. They became the intermediaries between gods and men. They alone could invoke the blessings of the gods and their curses, for they knew how to recite the hymns and to make sacrifices.

"The king before whom marches the priest, he alone dwells well-established in his own house; to him the earth yields at all times; to him the people bow themselves. The king who gives wealth to the priest that implores his protection, he will conquer unopposed the treasures, whether of his enemies or his friends; him the gods will protect." (IV. 50. 8-9).

"Did not Indra preserve Sudas in the battle of the ten kings through your prayer, O Vasisthas?" (VII. 33. 3).

"This prayer of Visvamitra, of one who has praised Heaven and Earth and Indra, preserves the people of the Bharatas." (III. 53. 12.)

And they also knew how to curse the people who disdained their service :—

"No, by Heaven! no, by Earth! I do not approve of this; no, by the sacrifice; no, by these rites! May the mighty mountains crush him! May the priests of Atiyaja perish!"

"Whosoever, O Maruts, weans himself above us or scoffs at the prayer we have made, may hot plagues come upon him, may the sky burn up that hater of Brahmans (brahma-dvish)! Did they not call thee,

Soma, the guardian of the Brahman ! Did they not say that thou didst shield us against curses ! Why dost thou look when we are scoffed at ! Hurl against the hater of the Brahman the fiery spear !"

"May the coming Dawns protect me, may the swelling Rivers protect me ! May the firm Mountains protect me ! May the fathers protect me at the invocations of the gods ! May we always be happy, may we see the rising Sun ! May the Lord of the Vasus order it thus, he who brings the gods and is most ready with his help ; Indra who comes nearest with his help ; Sarasvati, the swelling with the Rivers ; Parajanya who blesses us with plants ; the glorious Agni, who like a father, is ready to hear when we call ; All ye gods, come hither ! Hear this my prayer ! Sit down on this altar ! May they who are the sons of the Immortal, hear our prayers, may they be gracious to us ! May all the righteous gods who hear our prayers, receive at all seasons this acceptable milk ! May Indra with the hosts of the Maruts, accept our praise ! May Mitra with Tvashtar, may Aryaman receive these our oblations ! O Agni, carry this our sacrifice wisely, looking for the divine host. All ye gods, hear this my call, ye who are in the air and in the sky, ye who have tongues of fire (who receive sacrifices on the altar with Agni) and are to be worshipped ; sit down on this altar and rejoice ! May all the holy gods hear, may Heaven and Earth and the Child of the waters (Indra) hear my prayer ! May I not speak words which you can not approve, may we rejoice in your favours, as your nearest friends ! May the great gods who are as strong as the enemy, who

sprang from the Earth, from the conflux of the waters, give us gifts according to our desire, all our life, day and night! Agni and Parjanya, accept my prayer and our praise at this invocation, ye who are well-invoked. One made the earth, the other the seed: give to us here wealth and progeny! When the grass is spread, when the fire is kindled, I worship with a hymn, with a great veneration. Rejoice to day, ye adorable Visvedevas, in the oblation offered at this our sacrifice!" (VI. 52. 1-17).

In the 'Satyapatha Brahmana' (II. 2. 2. 6) we find that the Brahmans are almost identified as gods: "There are two kinds of gods: first the gods, then those who are Brahmans and who have learnt the Veda and repeat it: they are human gods (manushya-deva). And this sacrifice is twofold: oblations for the gods, gifts for the human gods, the Brahmans who have learnt the Veda and repeat it. Both gods when they are pleased, place him in bliss."

In the Rig-veda often five races (Pancha manusha, VIII. 9. 2; Pancha Janah, III. 37. 9; VI. 11. 4.) are mentioned as Tritsu, Yadu, Turvasu, Anu, and Puru. Of these we know positively that Tritsu was the most powerful ancient vedic ruling clan. Yadavas are mentioned as a dark complex people. Krishna of Dvaravati was of Yadava descent and a ruling chief (Yadu-kula-pati). Did the Yadus come from Mesopotamia and land at Dvaravati or were the pure Dravidians and for helping the Bharatas and the Pandavas, became intimately associated with them and with power and influence and later entered into the Hindu Pantheon? Turvasu was probably a Turanian clan. Anu, was it a

Kolarian or a foreign barbarous tribe who ate raw meat like the Scythians? Turvasu and Anu are often found together as Yadu-Anu and Yadu-turvasa, (I. 36. 18; IV. 30. 17; V. 31. 8; VI. 20. 12; VIII. 4. 7). Purus were a dark people. Often their chief Puru-Kutsa is invoked as the faithful ally of the Aryas. But he deserted Sudas or Sau-das and joined the Bharata tribes, if not led the confederation of ten kings against his former ally. He was probably taken a prisoner on the Purushni by the army of Sudas, for it is mentioned that the birth of Trasadasyu, son of his daughter Purukutsi, was the only consolation sent to him by the gods in his tribulations. Trasa-dasyu (the terror of the Dasyus) became a powerful sovereign, for he took the title of 'Samraj' (king of Kings) and his name is mentioned as a true friend and ally of the Aryas. However the Purus were later identified with the Kurus. It is explained on the ground that Kuru was the grandson of Purukutsa and he extended his kingdom up to the Jamuna and he became so popular, that the people called his descendants after the great king as Kurus. And Kurus in turn were later known as the Bharatas. Who were the Purus? Were they Aryanised Dravidians and by intermarriage with the Aryas, became Arya kings and upholder of Aryan might, prestige, influence and culture? Or were they Mesopotamian mixed Aryan immigrants and were not regarded as Aryas, but by their military discipline and prowess pushed their way to the Gangetic Doab and became the empire-builders? The latter theory seems to be more plausible and is also partially supported by the Mahabharata legend.

In the Mahabharata it is mentioned that Pururava, the first king of the lunar race of the Kshatriyas, sprang from the union of the moon-god with Illa, the daughter of Manu, from whom the human race originated. We know definitely that the moon-god was the patron deity of the Chaldeans and the centre of its worship was located at Urech (Ur). Pururava was succeeded by his son Nahusha and Nahusha by his son Yayati. Yayati's kingdom was contiguous to that of Vrishaparva, king of Ashuras. Did Yayati's kingdom lie in the mountainous districts of Upper Euphrates Valley as Mitanni, adjoining Media and Iran in the East, Armenia in the North and Assyria in the South? Yayati had two queens, Devayani and Sharmishta. Sharmishta was the daughter of the Ashura-king and Devayani was the daughter of his preceptor Shukra, of Bhrigu descent. Both these maidens were intimate friends and it happened that while once in a pleasure excursion in the woods, they saw a beautiful spring and they could not resist the temptation of taking a bath there in. After the plunge was over Sharmishta by mistake put on the garment of her friend, which enraged the Brahmin girl and she severely rebuked Sharmishta for such an impertinence. This infuriated the haughty Ashura princess and she told Devayani that she was but the daughter of a bought slave and in the paroxysm of her anger she pushed the Brahmin girl while she was dressing herself on the brink of the spring and Devayani fell precipitously into the water, and entangled in her own clothes and in the water weeds while she was thus helpless, Sharmishta hurriedly left her to this pitiful fate. Yayati was at that time hunting

in the woods. Hearing her faint agonized cries, he came to her rescue. On reaching home she weepingly asked her father, whether it was true as it was told her by Sharmishta that he was the bought slave of the Asura King Vrishaparva. Shukra assured his daughter that quite on the contrary he was much esteemed by the Asura king, for he alone knew the art of revivifying the wounded Ashuras in the battles. Shukra went to Vrishaparva and told him that he would leave his kingdom. The king implored him to stay. Shukra told Vrishaparva that it depended on his daughter's willingness. And her consent could be purchased only on the condition that Sharmishta would become her slave. Vrishaparva agreed and Sharmishta cheerfully obeyed her father's wish and she confessed her guilt. While Devayani on another occasion went to the woods to enjoy a picnic with her friend Sharmishta, she met again Yayati on a hunting trip and she proposed marriage to him. Yayati was hesitant as being of Kshatrya birth he did not dare to marry a Brahmin girl without her father's consent, for as he said, the righteous anger of a Brahmin was terrible. But she assured him that her father would do anything that is pleasing to her. And so they were married and Devayani took with her, her friend and slave Sharmishta. Sarmishta demanded from Yayati her right of Ritu. When Devayani came to learn about it, her wounded pride revolted and she went to her father to punish her faithless husband. Shukra cursed Yayati with premature senility (impotence). Thus out of spite for others ; Devayani bit her own tongue and she soon regretted it and begged her father to rescind the curse.

But Shukra answered that it could be only made transferable, if any one was willing to take it. Yayati had five sons, two by Devayani, Yadu, Turvase, three by Sharmishta Druhyu, Puru and Anu. But none was willing to take it but Puru. Yayati touched by this filial love and spirit of sacrifice, made Puru the ruler of his kingdom and retired in the forest. Puru was succeeded by his son Dushyanta. Dushyanta once on a hunting excursion met a pretty hermitage girl, fell in love with her and made a secret marriage with her, assuring her that after his return to the capital, he will send for her. Surprised by his long silence, she went herself to the court and the king denied that he had ever married her. Shakuntala flashed with indignation and regret, told him that she sought no longer the man who had no respect for truth, for "Truth is more precious than kings and even children." Dushyanta feeling ashamed of his conduct, apologized to her and convinced her that he loved her as ever and it was but a device to reconcile his people to the marriage. Out of this union, Bharata was born and Bharata became a powerful king. He conquered the Gangetic-Yamuna basin and celebrated a magnificent Ashmeda Sacrifice for which he is much eulogized in the Satyapatha Brahmana XIX. From Bharata, the name Bharatabharsa has been derived. (Mahabharata, I. 76; I. 82 83).

And according to the same legend, from Yadu sprang the Yadavas, from Turvasu the Yavanas, from Druhyu the Bhojas, from Puru the Pauravas (who were later known as Bharatas) and from Anu, the Mlenchas. It is very hard to make anything definite out of this incoherent and incongruous intermixture and confusion

of things. For Mlenchas were not certainly an Aryan people. In the Jaina Sutrakritanga (I. 1. 2. 15-16) we find that they even did not understand the Aryan tongue: "As a Mlecssya (Mlencha) repeats what an Arya has said, but does not understand the meaning, merely repeating his words, so the ignorant though pretending to possess knowledge do not know the truth, just as an uninstructed Mlessya." Yavanas have been positively identified with Ionians (Greeks). All that can be guessed from this is that Shukra an Aryan possibly fell into the hands of the Assyrians as a prisoner of war and for his proficiency in the art of healing the wounded soldiers, he was given his freedom and his friendship and good-will were esteemed by the Assyrian king. And his daughter married a neighboring Aryan prince who might have also another Assyrian wife, as it was not unusual and they later or their descendants migrated to India with their traditions which in course of time became mixed up and confused.

However it seems almost certain that Vedic Aryas settled between the Indus and the Sarasvati which was later called Bharmabharta. The Vedic hymns indicate that they brought sufficient women with them, so there was not much intermixture of blood between them and the Dasyus. But they took the slaves and the female slaves were highly esteemed. And in that age the conquerors always appropriated the prettiest women of the conquered. May be it is possible that there was not enough of it to change the Aryan type and Dasyu blood was more or less submerged.

In the Madyadesa settled a mixed swarthy com-

plexioned Aryans who in all probability migrated from Mesopotamia and they were known as the Bharata tribes. They could not bring sufficient women with them and they not only appropriated the most desirable Dasyu women, but also made alliance and intermaried with them. Even the Iranians did just the same. Siavush, son of Keï Kaoos (Cyrus), the crown prince of Iran when sent against the powerful Touran-king Afrasiab of Balkh, saw Ferenguiz the pretty daughter of Afrasib, fell in love with her and married her and stayed in the Turanian capital, deserting his own army and the cause of his own father. It has been the custom every where to take the women of the conquered people. But the Madyadesa Aryas went farther. They even gave their daughters to the conquered. Thus Damayanti chose a Nishada prince (Kolaraian) Nala for her husband. And it is not improbable that Visvamitra composed the Gyatri as a confession of faith to take into the Aryan fold the Aryanised Dasyus and called them twice-born (dvija). This reconciliation with the conquered peoples became the cardinal empire-building policy of the Bharatas and their high-priest Visvamitra conceded to this synthesis of races and religions as the most potent factor of Aryan expansion, glory and power. Thus four divisions of the Aryan India were recognised and acknowledged as is found in the Purushashutra (R. V. X. 129. II) in the tenth Mandala of the Rigveda which is the latest accretion and in the pantheistic hymn of Purusha "the Brahman springs from his mouth, the Rajanya (Kshatrya) from his arms, Vaishya from his thighs and Shudra from his feet." In this classification

of society into priests, warriors, agriculturists traders and the slaves, there is no novelty, strangeness, or peculiarity. Every nation divided the society into these natural four classes and is doing practically the identical thing even to-day. The followers of Ahura Mazda were divided into 'Athravas, Rathæsvas and Vastrya' which are exactly the three upper Hindu classes, Atharvans (priests), Rajanyas (rulers=Kshatryas) and Vashyas. The ancient Babylonian Law divided the entire population into three classes, 'Amelu', the nobles to which the royalty, the priests and the military chiefs belonged, 'Muskinu' the freemen and the tillers of the soil and 'Ardu' the slaves, who were owned by Amelus and Muskinus. The modern society is divided into the Mercantile classes (Bankers, manufacturers and politicians), army and priests, farmers and the proletariat. The only difference between the modern system and the Brahmanic order is that the merchant class (Vaisyas) has come into power gradually displacing the priests and the warrior classes and it is more flexible and not hereditary. But the domination of society either by the priestly class or by the mercantile community is of but relative importance. In ancient times the priest was supposed to be in communication with the gods and he knew the magic craft and the healing art, so he was regarded as semi-divine and accordingly he held the position of supreme honour and enjoyed relative privileges and comforts. But as the gods of one tribe usually become the devils of others, the maintenance of the priestly influence needs the military support, so the warrior class came into power. At first the priest and the warrior was the same person,

as we see the priest-king in Sumer (Patesi), but efficiency demanded division of labour, and it necessarily created two classes, holding and dividing power and influence. Of course there was rivalry between them as we find in the legend that Parasuram 'thrice seven times cleared the earth of the Kshatrya race and filled five lakes with their blood.' But the interdependence was early recognised as Manu wisely says : "Kshatryas prosper not without Brahmans ; Brahmans prosper not without Kshatriyas. Brahmans and Kshatriyas being closely united, prosper in this world and in the next." But as money can easily buy both the prayer of the priest and the arm of the warrior, soon the Vasya came into prominence, as is seen in modern civilisation which subordinates everything to economic interest. But it may be soon succeeded by the proletariat, for they are the majority of the population and they want to possess other people's accrued wealth, as is indicated by Soviet power in Russia.

Of course in other countries the class distinction is not so rigid and steep as the caste in India. It is because that the Hindu caste system became crystallized and stratified in the social organisation before there was complete amalgamation and fusion of the races, as in other countries. Though there is a marked underlying sense of unity of race, culture, religion and the one designation of a common fatherland, yet side by side still can be seen distinct divergent ethnic elements retaining their primitive customs and habits, and India is a veritable museum of living races. When so many diversified races with marked distinctions of colour, cranium, nose, facial angle and stature, and

heterogenous culture ranging from the stone age to that of the highest spiritual attainment of man, lived together, sharp classification was inevitable. Yet it is to the infinite credit of the Aryas and the Dravidians that they did not try to exterminate each other, or the other races, whom they enslaved, in order to monopolize the land and its products, which other conquerors have done under similar circumstances. If there are some disadvantages for lack of racial standard-uniformity, yet there is every reason to feel proud for the present generation that their ancestors out of humanity of impulse and generosity of heart let live the helpless aboriginal tribes and not butcher them as a sport. The very existence of the Veddas, Pariyas, Santals, Chandalas, is a living glorious monument to Indo-Aryan cultural refinement.

And even in the very early Vedic time the utility and the interdependence of divergent ethnic elements in the general social economy was realised and out of diversity an unifying link was created in the beautiful Purusha conception in which not only all classes founded their proper place as suited for their functional purposes, but also the whole universe merged in One Cosmic harmonious God :—

"Purusha of the thousand heads, the thousand eyes, the thousand feet, covered the earth in all directions and extended ten finger-breadths beyond. Purusha is all this (universe), whatever has been and shall be; he rules over Immortality which grows higher through food (sacrifice). So significant is his greatness, yet greater still is Purusha. One fourth of him is all creation (universe) and the three quarters of him make

the world of the immortals in the heaven. Three quarters of him are beyond us ; one quarter of Purusha extends over all that eats (animate creatures) and that does not eat (inanimate). From him the Almighty (Viraj) was born and from Almighty the Purusha. As soon as he was born, he reached out the earth from the both ends. When the gods made a clever sacrifice with Purusha as the offering, the spring was the sacrificial butter, the summer was the fuel and autumn the oblation. On the sacred grass they availed of Purush as their offering, Purusha that was born in the beginning ; him the gods sacrificed whose favour is to be sought and the Rishis. From this sacrifice performed, collected the sacrificial fat ; it created the animals of the air, of the forest and of the village (domesticated animals). From this sacrifice when completed, sprang the Hymns (Rigveda), the Songs (Sam-veda), sprang from it the magic incantations (Atharva-veda) and from it the Sacrificial Words (Yajur-veda). From it sprang the horse and all animals provided with two rows of teeth ; from it sprang the kine, the goats and the sheep. When they transformed the Purusha, how many times did they change him ? What became of his mouth ? what his arms ? what his thighs ? how were his feet called ? His mouth became the Brahmans, his arms the Rajanyas, his thigh the Vashyas and the Sudras sprang from his feet. From his mind sprang the moon, from his eye the sun, from his mouth Indra and Agni, from his breath Bayu. From his navel originated the air, from his head sprang the sky, from his feet the earth, from his ear the regions ; thus they built the worlds." (R. V. X. 90. 1-14).

Thus possibly the Vedic Rishi settlers in the Shapta-Shindavas were recognised as the Brahmins, the war-like immigrants from Mesopotamia and empire-builders in the Madhy-desa as Rajanyas (rulers) or Kshatryas for military prowess was essential for the maintenance, extension and defence of the kingdom, principally the Dravidian traders and farmers, except a few Aryan colonisers in Shapta-Shindavas, as Vaisyas and the Dravidian and Kolarian slaves as Sudras. And those who were beyond the Aryan pale of civilisation were called Nishadas, Kiratas and Chandalas—the Aborigines.

Of course this classification was by no means rigid. For yet the compact social organisation was in fluidic and plastic formation. All the Aryans in Shapta-Shindavas could by no means be Brahmans. For among them there must have been warriors and kings. And moreover one of the ancient name of the king is 'Vispati' (Lord of the Vis=Vaisya) in the vedic language and in the Iranian 'Vispaity' and in the Lithuanian 'Wieszpatis', thus clearly indicating that the majority of the Aryan population consisted of peasants and cattle-raisers ; otherwise their king could not have the title of 'Vispati.' That might have been the case in pure Aryan settlements, where being of one people, speaking the same language, worshipping the same gods, there was necessarily no wide gulf separating one class from the other and there was only division of labour, and Aryas being principally cattle-raisers and tillers of the soil, their king was called 'Vispati' lord of the 'vis=Vaisyas'. But in India the situation changed. They could have plenty of cheap slave-labour. And it is not to be supposed that when

they could easily enjoy the privileges of Brahmans or Kshatriyas and shroud their lives with a halo of romance and glory, either in the venerable majesty of the Brahmans or in the intoxicating thrill of military adventures and conquests, they would supinely settle down for a long time to the dull, prosaic, hard-working and hardly remunerative task of farming. In some Vedic hymns we get clear hints that all Aryans knew the use of arms and could fight, but when the war between the Aryas and the Dasyus, lasted for centuries necessarily efficiency demanded a fighting class. For farmers could not be asked at all times to fight and to let their harvest rot in the fields. So the adventurous ones among them formed the Kshatriya class, the religious minded the Brahmans and agriculture was generally left to the mixed population and to the Aryanised Dravidians and slaves.

So the Hindu caste is complex. It is not only based on the division of labour for social efficiency but also on 'varna' (colour), 'jati' (lineage), 'kula' (family), 'gotra', 'pravara' and 'karana'. The complexion of the Brahman is described to be white (pure Aryan type), of the Kshatriya red (mixed), Vasya copper bright (Dravido-Aryan), Sudra black (Kolarian).

The Brahmans of Bhrhamabharta claimed that they alone possessed the secret of spiritual knowledge. They were very orthodox and based their religion and rituals mainly on the exact Vedic interpretations. The Kshatriyas of the Madha-desa did not accept this arrogant claim of the Bharmabharta Brahmans of their monopoly of divine wisdom. They have been in intimate touch with the Babylonian and Egyptian cultures.

In India they made close and cordial alliances with the Dravidians and with whom they intermarried freely. Their mind therefore was as synthetic as their blood. The narrow conception that the Veda was the end-all and the supreme authority of all spiritual insight, was not satisfactory and sufficient for them. They speculated in the mysteries of life and death. They developed the Upanishadas in which the Egypto-Dravidian pantheistic idea of god and soul is markedly manifest. The very name 'Isa' or 'Isvara' is of non-Aryan origin. The Kshatriya princes who indulged in these mystic speculations were known as 'Rajarshis' (saintly kings). Brahmans often acknowledged their superiority and came to learn from them the spiritual secrets. Garga, son of the renowned Vedic scholar Balaka, came to Ajatsatru, king of Kasi to become his pupil.* Pravathna Jaivali, king of the Panchalas after silencing Svetaketu Aruneya and his father taught them the great doctrine, which was never known before to the Brahmans, but only to the Kshatriyas.† Even the learned Yagñyabalka found out that Janaka, king of Videha possessed superior knowledge.‡

Buddhism and Jainism were themselves protestant movements against the sacerdotal claims and meaningless Vedic hymns and ceremonies. The overwhelming success of Buddhism was due not so much to its doc-

* Kaushitaki-Brahmana-Upanishad ; Satyapatha Brahmana, XIV. 5. 1.

† Chandogya Upanishad, V. 3. 7 ; Satyapatha Brahmana, XIV. 9. 1.

‡ Satyapatha Brahmana, XI. 6. 2.

trine which though in its simplicity, purity and nobility in contrast to the cumbersome, expensive and wasteful Vedic rites appealed to the masses, but to its politico-social principle of equality of man, its duties and responsibilities which were denied by the Brahmanic order. Thus we find in the Jaina Uttaradhyayana (XII) that Harikesa-Bala born in a family of Svapakas (Chandalas) was offered the hand of beautiful Bhadra, by her father king Kausilika for his virtuous character, which he refused and he initiated many Brahmans into Jaina faith. It might have been simply poetic license to show the contrast of birth and virtue. But it is unquestionable that during the ascendancy of Budhism Jainism which lasted nearly a millenium, there was a good deal of race-mixture and amalgamation. That the fusion was not complete is evidenced by the preservation of many aboriginal tribes almost in their primitive simplicity. There was not sufficient time to obliterate completely the wide and deep gulf that lay between the physical traits and the cultural land-marks of the Aryan, Dravidian and the Kolarian. The absorption necessarily had to be slow. No theoretical preaching of equality could induce the high-browed Aryan to marry 'goat-nosed and repulsive' Kolarian on a large scale. The unions were generally non-conventional, as it has always happened under similar circumstances; the higher classes took the daughters of the lower classes if it pleased them and when the social order was firmly established with mutual consent and the lower classes rather prided themselves on such favour. If marriage really took place, it was in the lower stratum of society. Moreover Brahmanism was not dead. It

lived side by side in proud and serene quiescence with triumphant Buddhism. Learned and ascetic Brahmans still chanted the Vedas, performed religious rites, wrote Sutras and philosophical exegesis in defence of their faith. The famous six systems of Hindu Philosophy were thus created.

When Budhism had almost emasculated the nation by preaching the noble and sublime but an impractical ideal of the 'brotherhood of man,' 'sinfulness of war' and 'virtue of non-molestation even in a righteous cause' and the Kshatriya princes as the fashion of the day, following this extreme doctrine, entered into monasteries, where they were enjoined the practice of celebacy, thus depriving the nation of Kshatriya progency, tradition, culture and training, India lay prostrate at any invader's feet ; and when the blood-thirsty Scythians almost wiped out the Buddhists from Northern-India by ruthless rapine, massacre and incendiary vandalism which roused the whole nation, it was under Brahman leadership, the Gupta kingdom was established at Pataliputra (320 A.D.) and which with the extension of power and influence defeated the Vahikas in the Punjab, Sakas in Kathiwar (Chandra-gupta Vikramaditya, 380 A.D.), Hunas in Gandhara (455 A.D.) and the Scythian king Mihirgula at Sakala (528 A.D.), and India was liberated from foreign invasion—alas for a brief period only, for India's Kshatriya vitality was too exhausted and soon the Mahamedan hordes poured through the northern gate like an irresistable blood, everwhelming everything. But that brief period is of supreme import to Hindu civilisation. Then the Brahmanic laws (Manava Dharma Sastra) were formulated, the Maha-

bharata and the Ramayana were revised to the existing social needs, art and literature flourished as never before. It was the golden age of Sanskrit poetry, drama, astronomy and history (Purana).

When Hindu society was established and the Laws formulated Bhudhism had effaced almost all class marks of 'varna' distinctions and the majority of the population were 'varna-shankaras' except a few solitary Brahman families scattered here and there and aboriginal tribes who retreated to the mountain fastnesses. Still can be seen the imperceptible gradation of colour and features from the pure Aryan type in the highest classes to the Kolarian in the lowest. Though the Brahmanic laws are rigid and inflexible, still the blood-mixture is going on though on a very small scale and in an illegetimate and clandestine manner. Manu's caste distinctions were based principally on the professions and the trade-guilds. It is absurd and ridiculous, if it is to be taken literally that 'the marriage between a Brahman with the daughter of Vaisya engenders sons, called Ambastha (X. 8) or the union of a Sudra with a woman belonging to the Brahman class engenders Chandala.(X. 12). And the profession of an Ambastha was to practice medicine (X. 47) and the Chandala could only make his living by fishing' (X.48). There could not be enough marriages of Sudras with Brahman women as to create such a wide and extensive Chandala class. And moreover the Chandala features do not at all betray any Aryan admixture of blood, which is purely Kolarian, nor is there among them the cultural refinement which a Brahman mother is apt to impart to her children. Medicine is principally

practiced in Northern-India and Daksinabharta by the Brahmans. The Vaidyas of Bengal who claim to be Ambasthas, have generally 'das' as their appellation indicating thereby their Sudra origin.

The fact is that the mixed marriages were tabooed by the Aryan legislators, especially women of the superior classes should not marry men of inferior classes. This seems to be the universal sentiment. Thus to emphasize the degradation of such an undesirable union, they simply heaped on the issue of such 'mesalliance,' the repulsive epithet of Chandala who was an outcast and lived in filth and dirt outside the boundary or habitation of the Dvijas (twice-born). So according to Manu the son of a Brahman father and Sudra mother in the seventh generation by successive marriages with Brahmans in the female line could be promoted to the status of the sacerdotal caste (X. 64), but the son of a Sudra with a Brahman mother was degraded for ever. And any of the Dvijas who violated this cardinal and pivotal principle of the Aryan polity would be virtually excommunicated and regarded as Dasyu, whether he spoke the language of the Mletcha or the Aryan (X. 45).

Of course Manu may be based on older traditions. Even Vasistha and Goutama say almost the same thing, not of their profession but of their social status.

"They declare that the offspring of a Sudra and a female of the Brahmana caste becomes a Chandala, of a female of the Kshatrya caste, a Vaina of a female of the Vaisya caste, on Antiavasayin. They declare that the (son) begotten by a Vaisya on a female of the Brahmana caste becomes a Ramaka, on the female

of the Kshatrya caste, a Pullasa. They declare that the (son) begotten by a Kshatrya on a female of the Brahman caste becomes a Suta. Now they quote also : 'One may know by their deeds those who have been begotton secretly and to whom the stigma of springing from unions in the inverse order of the caste attaches, because they are destitute of virtue and good conduct.' (Children) begotton by Brahmanas Kshatriyas and Vaisyas on the females of the next lower, second lower and the third lower castes become (respectably) Ambasthas, Ugras and Nishadas. (The son of a Brahmana and) of a Sudra woman (is) Parasava. They declare that the condition of a Parasava is that of one who though living, is (as impure) as a corpse. Some call that Sudra race is a burial-ground (of the Aryan blood)." Vasistha, XVIII. I-II.

"(Children) born in the regular order of wives of the next, second or third lower castes (become) Savarnas, Ambasthas, Ugras, Nishadas, Doushyantas or Parasavas. (Children born) in the inverted order (of wives of higher castes become) Sutas, Maghadhas, Ayogavas, Kshattris, Vaidehakas or Chandalas. Some declare that the woman of the Brahmana caste has borne successfully to (husbands of) the (four) castes sons (who are) Brahmans Sutas, Magadhas or Chandalas ; (and that) a woman of the Kshatriya caste (has borne) to the same, Murdhavasiktas, Kshatriyas, Dhivaras, Pulkasas ; further a woman of the Vaisya caste to the same, Brijyakanthas, Mahisayas, Vaisyas and Vaidehas ; (and) a woman of the Sudra caste to the same Parasavas, Yavanas, Karanas and Sudras. In the seventh (generation men obtain) a change of caste, either being raised to a higher

one or being degraded to a lower one. The venerable teacher declares (that this happens) in the fifth (generation). And (the same rule applies) to those born (from parents of different classes that are) intermediate between (two of the castes originally) created. Those born in the inverse order (from fathers of a lower and mothers of a higher caste stand) outside (the pale of) the sacred law, as well as from a female of the Sudra caste. But he whom a Sudra (begets) on a female of an unequal caste shall be treated like an outcast. The last (Chandala) is the foulest." Goutama, IV. 16-28.

"A Brahman can marry girls of four classes. But of these only with the Brahmana woman, he produces Brahmana descendant; with the Kshatriya woman Murdavishikta; with the Vasya woman Amboshta: with the Sudra woman Parasava.....

A Kshatriya can marry girls from three classes and of which the children begotten through Kshatriya woman alone become Kshatriya; with the Vaisya woman Mahishya; with the Sudra women Ugra.

A Vaisya can marry Vaisya and Sudra women. And of these those who are born of a Vaisya woman are known as Vaisya and with a Sudra woman as Karan. A Sudra can not marry but of his own class. The children begotten by a Sudra with Sudra women are known as Sudra. But if the children are born of daughters of the superior classes by the inferior ones, the issues are looked down upon by all. If a Kshatriya begets a son with a Brahman woman, the son is known as Suta. To sing the praise of the kings is the chief duty of Sutas. The children born of a Brahman woman by a Vaisya, are designated as Vaidehik and Moudgalya.

To act as sentinels is their proper duty. They can not have consecration of the twice-born. The children born of a Brahman woman by a Sudra, are counted as Chandala. They are the disgrace of the race. They should dwell outside the boundary of the city. To act as executioner of those who are condemned to death, is their principal work. Those who are born of the Kshatriya woman by a Vaisya become Vandi, and by a Sudra, they are regarded as Nishada and live by fishing. The children born of Vaisya woman by a Sudra, are counted as Sutradhar.

If the cross-breeds like Ambousta etc. beget children in their class, the children inherit the rank of their parents. But if they raise children with the women of the inferior classes, the children get the rank of their mothers. Thus the children begotten of the parents of the own (equal) class, are known as Syajatiya and the children born of the unequal classes are known as Vijatiya. And if a Sudra begets children with a Brahman woman outcasts are born, equal in rank with Chandala, so if these outcasts beget children with Brahman women etc. their children are regarded as lower than Chandala." Anusasan parva, Ch. 48.

From this it is apparent that Hindu caste-formation is very analogous to that of America where we can see its formative process in historical times.

The American Indians were of various stocks, speaking more than 200 languages and 1000 dialects and some were very dark as the Potawatomi tribes. As soon as the Spainards landed on the soil of the New World there began a wholesale miscegenation. It is said on reliable authority that the sailers of Columbus took

with them from the Indian women syphilic virus and infected Spain, Italy, France, the whole of Europe and the modern world. With the arrival of the 'get-rich-quick' adventurers, they seized the public and the private hoarded wealth of the Indians, drove them to the mountains to develop the precious mines and unaccustomed to slave-labour, through the cruel and pitiless lash of the master, insufficiency of food and raiment, unhygeinic surroundings and lack of medical attention, many of them miserably perished, and their prettiest women were appropriated by their masters. The hybrid product of the union of the White and the Indian is called the 'Mestizo'. The Mestozos are preponderant in population in Latin America, of course headed by the Creoles who in political power and economic influence can easily pass as Spainards, though the aristocracy consists of a few so-called Andalusian families. When the Indian population dwindled under the ruthless and barbarous treatment, Negroes were imported from Africa as slaves for the labour in the mines. The cross between the White and the Negro is called the 'Mulatto' and the Negro and the Indian 'Zamho'. In Brazil the triple mixture of the blood of the Portuguese Indian and the Negro, has produced the 'Metis' who compose more than one-third of the present population of the country. And throughout the whole of South America the imperceptible gradation of shades of colour from the ivory-flashed brunette complexion and the fine oval face of the Latin race, to the muddy-colored flat face of the Indian, or the 'goat-nosed' ebon-hued African Negro, can be seen. Mr. Bryce estimates that South

America has a population of 45,000,000 of which he classifies 15,000,000 as Whites, 8,000,000 as Indians, 3,000,000 as Negroes, 13,000,000 as Mestizos, 5,700,000 as Mulattoes and 300.000 as Zambos.*

In North America the French mixed freely with the Indians to such an extent that there are to-day very few families in the Missouri-Illinois region that are entirely free from any trace of Indian blood and of the fifteen thousand persons of French-Canadian descent in Michigan, few are without some trace of Indian intermixture.'† With the advent of the Anglo-Saxons, the unions have been of temporary character the Indian women being merely objects of carnal gratification and when it was satisfied, they were usually cast aside at the will of the master. Only in the warlike Apache and Comanche tribes, there is some admixture of the Caucasian blood from the White women that were captured by them. Due to inhuman rapine, slaughter and driven from place to place to inhospitable regions through breach of solemn contracts, and to the special craving and addition of the Red-man to the fire-water (whiskey) the population has dwindled (in U.S.A. 1915) to 265,683 of which nearly 40 per cent are of mixed blood, 88030 cross between White and Indian, 2255 Negro and Indian and 1793 White, Negro and Indian and the rest unreported.‡

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* James Bryce : South America, P. 564.

† Bureau of American Ethnology ; Handbook of American Indians, P. 913.

‡ Indian population in the United States and Alaska, U. S. Census, 1910, Supplement 1915, P. 31.

However the real race-tension and friction in U.S.A. is not due to the Indian admixture of blood. With the almost extinction of the Indian tribes, it has solved its race problem, for 'the good Indian is the dead Indian' as the proverb goes. The crucial question is centered in the Negro who was imported as a slave for plantation labour. According to the Census of U.S.A. 1910 there is a negro population in the country of 9,827,763 of which 2,050,686 are cross-breeds. Mr. Davenport classifies them as follows:

The cross of Negro and White = Mulatto; Mulatto and White = Quadron; Quadroon and White = Octoroon; Mulatto and Mulatto = Cascos; Mulatto and Negro = Sambo; Sambo; and Negro = Mango; Octoroon and White = Mustifee; Mustifee and White = Mustifino.*

The real marriage between the White and the Negro is very unusual even in the Northern States where there is no legal or religious injunction against it, but public sentiment is too formidable against such a mesalliance. However the Negro blood is being slowly diluted with the Caucasion, and it is very hard to find a pure Negro type except in out-of-the way interior of the South, though all who are not of European descent, Indian or Mongolian (Chinese, Japanese and Koreans) are classified as Negroes. Of course marriage is forbidden by law in the South between the Whites and the Negroes. But as the Mulatto girls take pride in the admiration of White men and fair-complexioned children and White men find it conveinient and less risky to

* C. B. Davenport: Heredity of Skin-Color in Negro-White Crosses, P. 27.

have extraconjugal relation with them, this kind of alliance used to be almost public and it was regarded fashionable for well-to-do men to have such establishments of concubinage a few years ago, though recently through the pressure of public opinion, it has been driven to clandestine channels.

The rigid and inflexible colour-line is a marked feature of Southern life (U.S.A.) It tinges all their social aspects and relations. The Negroes are segregated into separate quarters in the cities, towns and villages, in railroads and tram-cars, even in legal institutions like the Court of Justice. Though in legal statuaries, it is not mentioned that there is any distinction to be made in their operation between the Whites and the Coloured, yet in practice there seems to be two fundamentally different laws. Of course the Negroes are not allowed in the Whitemen's schools and Churches and in the only social relation a Negro can enter into a Whiteman's house is but in the capacity of a servant.

Among the cross-beeds themselves there are also many social grades and demarkations. Those who have fair complexion look down with contempt upon those who have fairer colour. The social position of each class depends mainly more or less upon the relative whiteness of their complexion. The aversion between the Mulattoes and the Negroes is as great as between the Whites and the Negroes.

Once this color-line with its graded social designations, is started, it does not finish with the Negro. It has also entered into the social fabric of the Whiteman, as is natural. The German is called the Dutchman (Huns during the war); Italian = Dago and

Wof; Jew = Shiny; Mexican = Greaser; Irishman = Mick (Sein-Feiner, post-war term); Hungarian = Hunk and Hunky; Bohemians = Bohoes and Bohunks. There is also alloted position and occupation for all. Rarely they intermarry. Each ethnic group marries in its own circle. The Negro or Nigger as he is usually called, is of course at the bottom of the ladder. He does the menial work which no body else will do. In the South he supplies the cheap labour for plantation work and in the cities he is the garbage and ash-carrier, porter in Pullman cars and elevator-man in apartment houses and the Negro girl works as a maid-servant or as a laundry help. The Italian sells vegetables and fruits, or acts as a shoe-repairer or a barber. The Jew is a hawker of second-hand goods in the beginning, then he opens a stationery or shoe-store and lastly he enters the garment trade or the brokers' exchange. The Syrian goes from house to house with his embroidered cotton goods. The Chinaman opens a laundry place, or a Chop-suey Restaurant or a shop to sell queer and odd goods from ancient Cathay. The Japanese especially in California works as a farm-labourer as the Sikh or opens a quaint shop to sell painted letter papers, fish-jars, flower-pots, dainty and charming artistic products and the Geisha girl adds a colourful touch by her childlike movements and she appears almost like a living doll. The Scandanavian is, in the middle-west, a farmer. The German keeps a grocery or a delicatessen store or is in the beer and Drug business. The Irishman keeps a saloon, or is a lawyer and is in the petty politics of municipal administration. The American is the owner

of farm, plantation, mines, forests and extensive ranches, captain of large industry, organiser and controller of big business, like railroad, steel, oil and banking interests. All these classes invariably live apart and move in their own sphere.

The caste in India and the social and occupational designation in U. S. A. are very analogous. Only in India it has been crystallized and stratified in the social fabric and is hereditary, while in America it is still in fluidic and formative state as it was in the Brahmana period just before Buddhism, and the economic tendency of the modern age prevents its clear and unmistakable expression. But it was no unique thing in India. The Egyptian priesthood was hereditary. In Peru 'the priests of the Sun at Cuzco transmitted their office to their sons; so did the Quipucamayoc or public registrars and the 'amantes' and 'haravecs' the learned men and the singers' Under the Theodosian Code, all public functions and trade-guilds of the Roman Empire were made hereditary 'from the senator to the waterman on the Tiber or the sentinel at a frontier post.' Mr. Dill writes in his 'Roman Society in the last days of the Western Empire' (Book III. 1) that 'one of the hardest tasks of the Government was to prevent the members of these guilds from deserting or evading their hereditary obligations. It is well known that the tendency of the later Empire was to stereotype society, by compelling men to follow the occupation of their fathers, this preventing a free circulation among different callings and grades of life.....It was the principle of rural serfdom applied to social functions. Every avenue of

escape was closed. A man was bound to his calling not only by his father's but by his mother's condition. Men were not permitted to marry out of their guild. If the daughter of one of the baker caste married a man not belonging to it, her husband was bound to her father's calling. Not even a dispensation obtained by some means from the imperial chancery, not even the power of the Church, could avail to break the chain of servitude.'

Nor the restriction of intermarriage was a specialty of the Brahmanic system. 'In Madagascar marriage is strictly forbidden between the four classes of Nobles, Hovas, Zarahovas and Andevos, the lowest of whom however, are apparently slaves.' Neither the patricians and plebians of Rome, Spartiatai and Dakones or Perioikoi at Sparta could intermarry. And moreover there is a very close affinity between the Roman 'gens' and 'curia', the Hellenic 'phratria' and 'phyle' and the Brahmanic 'gotra' and 'kula'.

From the foregoing observations it is clear that the Hindu caste has originated in the mixture of the blood of the divergent ethnic stocks and with it has been combined the fixed hereditary occupation according to trade-guilds, especially in the post-Buddhistic period, though for a long time it had previously been in the embryonic state of development and necessarily in more elastic flexibility.

VII.

Social Organisation.

Aryas loved Law and Order. Well-disciplined in war, they regulated their conduct accordingly in all departments of life. With time they lost their elasticity and became merely crystallized conventions. It is very hard always to trace them to their primeval origin. They are often obscured from recognition by the rampant growth of later traditions round them. However the common origin of the Iranian and the Indo-Aryan 'System of customary Regulations' (Law and administration) can be readily seen. They had one code of ethics for themselves and quite another for the non-Aryans (anāryas). Among themselves they observed a very high sense of honour, nobility and chivalry, which is even unsurpassed to-day and the least deviatron from which meant for an Arya social disgrace and ostracism, which was regarded worse than death. Religion and ethics were too intricately interwoven for them to be separated. The soul was the reality of realities and the pivotal point of their religious, philosophical and social structure. 'Karma' appertains to the soul and shapes its future existence like the biophores or determinants of the germ-plasm. There is no escape from it. Life is but temporary. But the soul is immortal. Karma determines the course of the soul. Good deeds lift it up, evil deeds degrade it through their cumulative action. Worldly pleasures and benefits therefore should never be purchased at the cost of 'virtue,' thus to mortgage the future. And the racial

pride strengthened the moral resolution that the Arya name should never be sullied by a dishonourable act. When the Aryan chieftains and princes fought among themselves, after the subjugation of the aboriginal tribes and races and the pacification of the country, it was more as a display of physical prowess, matrial talents and genius, than the covetious longing for a neighbor's wealth, women and possessions. For war in Aryavarta was regulated by strict rules and regulations which could hardly be violated. By this code, no unarmed, appealing, wounded or fleeing warrior could be hurt or killed ; nor the non-combatants could be molested ; nor the conquered dispossessed of their property. "One should not fight with poisoned or false arrow. And to kill a Kshatrya, who is weak, issueless, unarmed, terrified, or who has lost his armament or fallen from his charge, is very improper. If the enemy is wounded in the war seriously, endangering his life, he should be sent to his own abode or brought home, and his health should be fostered by medical treatment. Manu has ordained fair war and the good men should always abide by it. Who by unfair means or by cunning wins a war, he becomes the cause of his own destruction. Honest men always win war by honest means over dishonest people. And it is better to lose life in an honest fight, than to win a war by unfair means. It is true that in many cases, one does not pay his penalty immediately for evil acts, but his evil acts sooner or later, gradually bring about his destruction··· Therefore one should not wish victory by unfair means. Thereby he can never win honour and it is very blameworthy and is temporal only. It destroys the king

with his kingdom. One who is armourless, appealing, unarmed or solicits his protection, should never be fought." 'Santi Parva, Ch. 95-96. Only the king if he survives the war, either accepts the suzerainty of the victor, or he is replaced on the throne by his son or brother who acknowledges him as his 'Adipati' or 'Samrat' (emperor). But an Arya under no circumstances could be subjected to slavery. "Never shall an Arya be subjected to slavery. But if in order to tide over family troubles to find money for fines or court decrees or to receive the (confiscated) household implements, if the life of an Arya is mortgaged, they (his kinsmen) shall as soon as possible redeem him (from bondage); and more so if he is a youth or an adult capable of giving help."

"Any person who has voluntarily enslaved himself shall, if guilty of an offence, be a slave for life. Similarly any person whose life has been twice mortgaged by others shall, if guilty of an offence, be a slave for life. Both of these two sorts of men, if they are once found desirous to run away to foreign countries, be slaves for life."

"Deceiving a slave for his money or depriving him of the privileges he can exercise as an Arya (aryabhava) shall be punished with half the fine (levied for enslaving an Arya). A man who happens to have taken in mortgage the life of a convict or of a dead or an afflicted man shall be entitled to receive back (from the mortgager) the value he paid for the slave."

"Employing a slave to carry the dead or to sweep ordure, urine or the leaving of the food; keeping a slave naked; or hurting or abusing him; or violating

(the chastity) of nurses, female cooks of the class of joint cultivators (ardhasitika) or of any other description shall at once earn their liberty for them. Violence towards an attendant of high birth shall entitle him to run away. When a master has connection with a nurse or pledged female slave against her will, he shall be punished with the first amercement; a stranger doing the same shall be punished with the middlemost amercement. When a man commits or helps another to commit rape with a girl or a female slave pledged to him, he shall not only forfeit the purchase-value, but also pay a certain amount of money (sulka) to her and twice the amount (of the sulka to the Government)."

"The offspring of a man who has sold himself as a slave shall be an Arya. A slave shall be entitled to enjoy not only whatever he has earned without prejudice to his master's work but also the inheritance he has received from his father. On paying the value (for which one is enslaved) a slave shall regain his Aryahood. The same rule shall apply to born or pledged slaves. The ransom necessary for a slave to regain his freedom is equal to what he has been sold for. Any person who has been enslaved for fines or court decrees shall earn the amount by work. An Arya made captive in war shall for his freedom pay a certain amount proportional to the dangerous work done at the time of his capture, or half the amount."

"If a slave who is less than eight years old and has no relatives, no matter whether he is born a slave in his master's house or fell to his master's share of inheritance, or has been purchased or obtained by his

master in any other way, is employed in any mean avocations against his will or is sold or mortgaged in a foreign land ; or if a pregnant female slave is sold or pledged without any provision for her confinement, his or her master shall be punished with the first amercement. The purchasers and the abettors shall be likewise punished."

"Failure to set a slave at liberty on the receipt of a required amount of ransom shall be punished with a fine of twelve panas ; putting a slave under confinement for no reason shall be likewise punished. The property of a slave shall pass into the hands of his kinsmen ; in the absence of any kinsmen, his master shall take it. When a child is begotten on a female slave, both the child and the mother shall be at once recognised as free. If for the sake of substance, the mother has to remain in bondage, her brother and her sister shall be liberated. Selling or mortgaging a male or a female slave once liberated shall be punished with a fine of twelve panas with the exception of those who enslave themselves. Thus the rules regarding the slaves." Kautilya's Arthasastra, III. 13.

"Of several remarkable customs existing among the Indians there is one prescribed by their ancient philosophers which one may regard as truly admirable : for the law ordains that no one among them shall under any circumstances, be a slave, but that, enjoying freedom, they shall respect the equal right to it which all possess : for those they thought who have learned neither to domineer over nor to cringe to others, will attain the life best adapted for all vicissitudes of lot." Megasthenes, Fragment I. 40.

"The same writer (Megasthenes) tells us farther this remarkable fact about India that all the Indians are free and not one of them is slave. The Lakedaimonians and the Indians so far agree. The Lakedaimonians however hold the Helots as slaves and these Helots do servile labour ; but the Indians do not even use aliens as slaves, and much less a countryman of their own." Arrian, X.

"On the other hand, a sense of justice, they say, prevented any Indian king from attempting conquest beyond the limits of India." Arrian, IX.

Of course in the beginning of the Aryan advance, especially when there was stubborn resistance against the encroachment by the autochthonous population, there was not that sense of justice which made the Aryan rule so popular at a later time and became the main support of Aryan extension of power and influence all over India. Without this unimpeachable faith in the Arya sense of honour and justice there could not have been established as early as the sixth century B.C. in the heart of the Dravidian population in the Andhra country an influencial Apastamba school of Yayurveda. But it must have taken centuries to develop this moral sense of humanity and equity of justice. For in the Rig-veda and the Zend-Avesta we find that the Aryas prayed only for the success and the glory of the Aryan arms and for the destruction of their enemies and for the possession of their land and cattle.*

* Grant me this boon, O good, most beneficent Drvaspa ! (personified deity of the Gos = cow ; Gosurun = Soul of the Bull) that I may bind the Turanian murderer Franghrasyan, that I

However when the fury and the passions of war subsided the laws were impartially enforced. Contrary to beliefs held in some quarters, the Arya kings were never autocratic or arbitrary. They were regulated by fixed rules as any other mortal, and they could no more break one of them with immunity than one of their most degraded subjects. As far as the record of Hindu tradition and history goes, the Arya kings have been virtually constitutional kings. In the Aitraya Brahmana (VIII. 4. 1. 15) we find this coronation oath: "*May I be deprived of heaven, of life and of offspring if I oppress you.*"

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may drag him bound, that I may bring him bound unto king Husravah, that king Husravah may kill him behind Chechasta lake." Gos Yast IV. 18.

"We worship the good, strong, beneficent Fravashis (Pitris) of the faithful, who form many battalions, girded with weapons, lifting up spears and full of sheen; who in fearful battles come rushing along where the gallant heroes go and assail the Danus (Danavas). There you destroy the victorious strength of the Turanian Danus." Farvardin Yast IX. 37-38.

"Unto the glory of the Aryans, made by Mazda, be propitious with sacrifice, prayer, propitiation and glorification. Ahura Mazda spoke unto Spitama Zarathustra, saying: 'I made the Aryan Glory, rich in food, rich in flocks, rich in wealth, rich in glory; provided with full store of intelligence, with full store of money, with stand need and to withstand enemies.....it destroys the non-Aryan nations.

Hail to the bright and glorious star Tistrya! Hail to the strong wind, made by Mazda! Hail to the Glory of the Aryas! We worship Asha-Vahista, the fairest Amesha-Spenta. We worship the Ahuna Vairya. We worship the right-spoken Words (arshukhdha vakô), fiend-smiting and healing.....We worship the Glory of the Aryas." Astad Yast, 1-8.)

"As the pregnant woman giving up her sweet desires looks to the welfare of the embryo, so a dutiful king giving up his personal comforts and pleasure, should look to the welfare of his subjects." Santi-parva, Ch. 58.

"In the happiness of his subjects lies his happiness; in their welfare his welfare; whatever pleases himself he shall not consider as good, but whatever pleases his subjects he shall consider as good." Kautilya's Arthasastra, I. 19.

"No king should give room to such causes as would bring about impoverishment, greed or disaffection among his people. If however they appear, he should at once take remedial measures against them. Which (of the three) is the worst—an impoverished people, greedy people or disaffected people? An impoverished people are ever apprehensive of oppression and destruction (by over-taxation) and are therefore desirous of getting rid of their impoverishment, or of waging war, or of migrating elsewhere. A greedy people are ever discontended and yield to the intrigues of the enemy. A disaffected people rise against their master along with his enemy." Kautalya's Arthasastra VII. 5.

"When the king punishes an innocent man, he shall throw into water dedicating to the God Varuna a fine equal to thirty times the unjust imposition; and this amount shall be afterwards distributed among the Brahmans." Kautilya's Arthasastra IV. 13.

"A king worthy of praise should learn his own faults from his subject's point of view and get rid of them—but never punish the people." Sukra-niti-sara I. 265.

Nor did the kings lead indolent and voluptuous lives like their degenerate descendants and prototypes of to-day. The princes were specially trained for the arduous royal task.

"Sciences shall be studied (by the prince) and their precepts strictly observed under the authority of specialist teachers. Having undergone the ceremony of tonsure, the student (prince) shall learn the alphabet (lipi) and arithmetic. After investiture with sacred thread, he shall study the triple Vedas, the science of Anvikshaki (philosophy of Sānkhya, Yoga and Lokāyata —positism or atheism) under teachers of acknowledged authority, the science of Vatra (agriculture, cattle-breeding and trade), under government superintendents and the science of Dandaniti (governmental administration) under theoretical and practical politicians."

"He shall observe celebacy till he becomes sixteen years old. Then he shall observe the ceremony of tonsure and marry. In view of maintaining efficient discipline, he shall ever and invariably keep company with the aged professors of sciences in whom alone discipline has its firm root. He shall spend the fore-noon in receiving lessons in military arts concerning elephants, horses, chariots and weapons and the after-noon hearing the Itihasa. Purana (ancient history), itivritta (narrations), akhyāika (tales), udāharana (illustrative examples), dharmasastras (Sacred Laws) and arthasastra (economics) are (comprised in) Itihāsa. During the rest of the day, he shall not only receive new lessons and revise old lessons but also hear over and again what has not been clearly understood. For from hearing (sutra) ensues knowledge; from knowledge

steady application is possible ; and from application self-possession (atmavatta) is possible. This is what is meant by efficiency of learning."

"The king who is well educated and disciplined in sciences, devoted to good government of his subjects and bent on doing good to all people, will enjoy the earth (kingdom) unopposed." Kautilya's Artha-sastra I. 5.

"If the king is energetic, his subjects will be equally energetic. If he is reckless, they will not only be reckless likewise, but also eat into his works. Besides a reckless king will easily fall into the hands of his enemies. Hence the king shall be ever wakeful."

"He shall divide both the day and the night into eight nalikas (one and half hours), or according to the length of the shadow (cast by a gnomon standing in the sun) : the shadow of three purushas (36 angulas or inches), of one purusha (12 inches), of four angulas (4 inches) and absence of shadow denoting mid-day are the four one-eighth divisions (in the reverse order) in the afternoon."

"Of these divisions during the first one-eighth part of the day, he shall post watchmen and attend to the accounts of receipts and expenditure ; during the second part, he shall look to the affairs of both citizens and country people ; during the third, he shall not only bathe and dine, but also study ; during the fourth, he shall not only receive revenue in gold, but also attend to the appointments of superintendents ; during the fifth, he shall correspond in writs with the assembly of his ministers and receive the secret information gathered by his spies ; during the sixth he may engage

himself in his favourite amusements or in self-deliberation ; during the seventh he shall superintend elephants, horses, chariots and infantry and during the eighth part, he shall consider various plans of military operations with his commander-in-chief. At the close of the day, he shall observe the evening prayer (sandhya). During the first one-eighth part of the night, he shall receive secret emmissaries ; during the second he shall attend to bathing, supper and study ; during the third, he shall enter into the bed-chamber amid the sound of trumpets and enjoy sleep during the fourth and the fifth parts ; having been awakened by the sound of trumpets during the sixth part, he shall recall to his mind the injunctions of sciences as well as the day's duties ; during the seventh, he shall sit considering administrative measures and send out spies ; and during the eighth division of the night, he shall receive benedictions from the sacrificial priests, teachers and the high priest, and having seen his physician, chief cook and astrologer and having saluted a cow with ts calf and a bull by circumbulating round them, he shall get into his court." Kautilya's Arthasastra I. 19.

Nor could the king carry out the policy of the state according to his own whims and caprices. He had to follow the counsel of his ministers. Even such a popular king as Ramchandra had to banish his own beloved wife, for the public opinion was against her. And moreover there were numerous Republics where the administration was conducted by the representative Shava and by their selected spokesmen.* But the

* Rhys Davids : Buddhist India.

public sentiment was for a hereditary king conducting the affairs of the State according to the principles of the Dharmasastra with a representative popular advisory Council so that the ambition and rivalry for power among chieftains and leaders could not bring about dissention and confusion and thus weaken the state. Nor was the king allowed to do whatever pleased him. He was constitutionally bound to obey the Laws. And if he disobeyed or violated them ruthlessly, he forfeited thereby all his royal prerogatives, if not his life. He had simply to carry out the decision of the Mantri-parisad (assembly of ministers) only acting as its president :

"All kinds of administrative measures are preceded by deliberations in a well-formed council.....The king may ask his ministers for their opinion either individually or collectively and ascertain their ability by judging over the reasons they assign for their opinions .....The school of Manu says that the assembly of ministers shall be made to consist of twelve members. The school of Brihaspathi says that it shall consist of sixteen members. The school of Usanas says that it shall consist of twenty members. But Kautilya holds that it shall consist of as many members as the needs of his dominion require." Kautilya's Arthasastra I. 15.

"Of the great officers of state, some have charge of the market, others of the city, others of the soldiers. Some superintend the rivers, measure the land as is done in Egypt and inspect the sluices by which water is let out from the main canals into their branches so that every one may have an equal supply of it. The same persons have charge also of the huntsmen and

are entrusted with the power of rewarding or punishing them according to their deserts. They collect the taxes and superintend the occupations connected with the land, as those of the wood-cutters, the carpenters, the blacksmiths and the miners. They construct roads and at every stadia set up a pillar to show the bi-roads and distances. Those who have charge of the city are divided into six bodies of five each. The members of the first look after everything relating to the industrial arts. Those of the second attend to the entertainment of foreigners. To these they assign lodgings, and they keep watch over their modes of life by means of those persons whom they give to them for assistants. They escort them on the way when they leave the country or in the event of their dying, forward their property to their relatives. They take care of them when they are sick and if they die bury them. The third body consists of those who inquire when and how births and deaths occur with the view not only of levying a tax, but also in order that births and deaths among both high and low may not escape the cognizance of Government. The fourth class superintends trade and commerce. Its members have charge of weights and measures and see that the products of the season are sold by public notice. No one is allowed to deal in more than one kind of commodity unless he pays a double tax. The fifth class supervises manufactured articles, which they sell by public notice. What is new is sold separately from what is old and there is a fine for mixing the two together. The sixth and the last class consists of those who collect the tenths of the articles sold. Fraud in the payment of this tax is punished with death. Such

are the functions which these bodies separately discharge. In their collective capacity they have charge of their special departments and also of matters affecting the general interest, as the keeping of the public buildings in proper repair, the regulation of prices, the care of markets, harbours and temples. Next to the city magistrates there is a third governing body which directs military affairs." Megasthenes, Fragm. 34; Strabo XV. I. 50-52.

Moreover there were departmental heads supervising over accounts (II. 7), treasury (II. 11), mines (II. 12), metals (Lohadhyakshah), mint (Lakshnadhyshah) ocean-mines (conch-shells, pearls, corals) and salt (II. 12), bullion and goldsmiths (II. 13), storehouse (koshthagara of agricultural produce, II. 15), commerce (II. 16), forest produce (II. 17), armoury (II. 18), weights and measures (II. 19), time and space (division of day and lineal measure, II. 20), custom-duties and tolls (II. 21-22), weaving (II. 23), agriculture (II. 24), liquor (II. 25), slaughter-houses (II. 26), prostitutes (II. 27), ships and navigation (II. 28), cows (II. 29), horses (II. 30), elephants (II. 31), chariots (II. 32), infantry (II. 33), passports (II. 34), pasture-lands (II. 35), of the Capital-city administration (Nagaraka, II. 36) and Kautilya devotes a chapter to each of them as to their respective duties with minute details.

"Among the Indians, officers are appointed even for foreigners, whose duty is to see that no foreigner is wronged. Should any of them lose his health, they send physicians to attend to him and take care of him, otherwise and if he dies they bury him and deliver over such property as he leaves to his relatives.

The judges also decide cases in which foreigners are concerned, with the greatest care and come down sharply on those who take unfair advantage of them." Megasthenes, Frag. I.B ; Dioderus III. 63.

The king was simply a symbol of sovereignty as Kautilya says 'this is merely a flag ; and yourselves (ministers) are the lords.' (V. 6). He was, as it were, a living organ of national will, through with the pulse of national life throbbed and thrilled.

"Let the king protect (his) subjects receiving as his pay a sixth part (of their incomes or spiritual merit). Let him act according to his instructions. Let him not turn back in battle. Let him not strike with barbed or poisoned (weapons). Let him not fight with those who are in fear, intoxicated, insane or out of their minds, (nor with those) who have lost their armour, (nor with) women, infants, aged men and Brahmanas, excepting assassins." Baudhayana I. 10. 1-12.

"To protect all created beings is the additional (occupation) of a king and to inflict lawful punishment. He shall support (those) Srotriyas (who are) Brahmanas and people unable to work (even if they are) not Brahmanas and those who are free from taxes and (needy) temporary students. And (to take) measures for ensuring victory (is another duty of a king) especially when danger (from foes threatens the kingdom) ; and (to learn) the management of the chariots and the use of the bow (is a further duty of the king) as well to stand firm in battle and not to turn back. No sin (is committed) by injuring or slaying (foes) in battle excepting those who have lost their horses, charioteers, or arms, those who join their hands (in supplication), those who

flee with flying hair, those who sit down with averted faces, those who have climbed (in flight) on eminences or trees, messengers and those who declare themselves to be cows or Brahmanas. If another Kshatriya is supported by (the king), he shall follow the same occupations as his (master). The victor shall receive the booty gained in battle. But chariots and animals used for riding (belong) to the king, and a preferential share, except when the booty has been gained in single combat. But the king shall equitably divide (all) other (spoils)."

"Cultivators (shall) pay to the king a tax (amounting to) one-tenth, one-eighth, one-sixth (of the produce). Some declare that (the tax) on cattle and gold (amounts to) one-fiftieth (of the stock). In the case of merchandise one-twentieth (shall be paid by the seller) as duty (and) of roots, fruits, flowers, medicinal herbs, honey, meat, grass and fire-wood one-sixtieth. For it is the duty (of the king) to protect the (tax-payers). But to (the collection of) these (taxes) he shall always pay particular attention. He shall live on the surplus. Each artizan shall monthly do one (day's) work (for the king). Hereby (the taxes payable by) those who support themselves by personal labour have been explained, and (those payable by) owners of ships and carts. He must feed these (persons while they work for him). The merchants shall (each) give (every month one) article of merchandise for less than the market value." Gautama X. 7-35. And 'as the sun draws vapour from different surfaces of water to distribute it in thousand showers of rain, so the king collects revenue from different sources to distribute it in thousand good deeds to the people.' Kalidasa.

There were initiation ceremonies (Upanayana) to learn the ancient and holy lores and the Aryas put on the sacred girdle as a testimony to their second-birth (dvija) of enlightenment. It was not confined to Aryavarta alone. The Iranians did just the same. "What is it that makes the unseen power of Death increase? Ahura Mazda answered: 'It is the man that teaches a wrong law, it is the man that continues for three years without wearing the 'sacred girgle" (kosti), without chanting the 'Gathas' without worshipping the good waters.' Then the Drug demon, the guileful one answered: 'O holy, tall-formed Sraosha! This one is my fourth male who either, man or woman, being more than fifteen years of age, walks without wearing the sacred girdle and the sacred shirt' (Sadarah)." Fargrad XVIII. 9. 54.*

"There are four castes (Varna), Brahmanas, Kshatriyas, Vaisyas and Sudras. Three castes, Brahmans, Kshatriyas and Vaisyas (are called) twice-born. Their first birth is from their mother; the second from the investure with the sacred girdle. In that (second birth) the Savitri is the mother, but teacher is said to be the father. They call the teacher father, because he gives instruction in the Veda." Vasistha II. 1-4; Manu II. 169.

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* Kosti must be worn by all Zoroastrians like 'Upabit' by the Brahmans from the age of fifteen. He who does not wear it, must be refused water and bread by the community, that is he is virtually excommunicated. It is the badge of the faithful by which he is united both with Ormazd and his fellow-believers. The Kosti consists of seventy two interwoven filaments which should three times circumvent the waist, and twelve threads.

"I have created four castes according to their mental and moral characteristics and their occupation (Guna and Karma)." The Gita.

"Let him intitate a Brahmana in the eighth (year) after conception, a Kshatriya in the eleventh year after conception, a Vaisya in the twelfth year after conception." Vasistha XI. 49-51.

"They do not put any (religious) restrictions on the acts of a (child) before the investiture with the girdle (is performed). For he is on a level with a Sudra before (his second) birth through the Veda." Baudhayana I. 2 3.

"He who has been initiated shall dwell as a religious student in the house of his teacher for forty-eight years (or) a quarter less (or) less by half, (or) three-quarters less, twelve years (shall be) the shortest time (for finishing his studies.)" Apastamba I. I. 11-16.

"He (the student) shall not eat food offered (at a funeral oblation or sacrifice), nor pungent condiments, salt, honey or meat. He shall not sleep in the day. time. He shall not use perfumes. He shall preserve chastity." Apastamba I. I. 2. 22-26.

"A student who has broken the vow of chastity shall offer an ass to Niriti on a cross-road. Putting on the skin of that (ass) with the hair turned out side and holding a red (earthen) vessel in his hands he shall beg in seven houses, proclaiming his deed. He will be purified after a year." Gautama XXIII. 17-19.

"A Brahman (shall) always (abstain from) spirituous liquor." Gautama 11. 20. However meat was not strictly forbidden, but beef became unpopular in later

time. "Let him not eat (the flesh) of either the cow or the ox: for the cow and the ox doubtless support everything on earth. The gods spake, 'Verily, the cow and the ox support everything here; come let us bestow on the cow and the ox whatever vigour belongs to other species!' Accordingly they bestowed on the cow and the ox whatever vigour belonged to other species (of animals); and therefore the cow and the ox eat most. Hence, were one to eat (the flesh) of an ox or a cow, there would be as it were, an eating of everything or as it were, a going on to the end. Such a one indeed would be likely to be born (again) as a strange being, (as one of whom there is) evil report such as 'he has expelled an embryo from a woman', 'he has committed a sin'; let him therefore not eat (the flesh) of the cow and the ox. Nevertheless Yagñavalkya said, 'I for one, eat it, provided that it is tender'." Satapatha-Brahmana III. 1. 2. 21.

After finishing the study the student was enjoined to marry. Marriage was a very sacred institution to the Arya. For on the birth of a son depended the ancestor-worship and consequently their salvation. So it was regarded higher than any other religious performance. (Adiparva XIII). It perhaps originated from the necessity of circumstances. Engulfed in the non-Aryan mass of population where the few Aryas could be easily submerged, the urge of the increase of Arya-birth rate, was the safest and the best measure adopted to maintain the Aryan supremacy, tradition and culture.

"A student after he has studied the Veda and has offered a present to his teacher, should, with permis-

sion (of his parents) take a wife." Khadira Grihya Sutra I. 3. 1.

"Let him first examine the family (of the intended bride or the bridegroom) as it has been said above, 'Those who on the mother's and on the father's side.' Let him give the girl to a (young man) endowed with intelligence. Let him marry a girl that shows the characteristics of intelligence, beauty and moral conduct and who is free from disease." Asvalayana Griha Sutra I. 5. 1-3. However 'one shall not mention the blemishes of a girl.' Apastamba I. 11. 31. 8.

"A householder shall take a wife (of) equal (caste) who has not belonged to another man and is younger (than himself). A marriage (may be contracted) between persons who have not the same Pravaras (and) who are not related within six degress on the father's side or on the side of the begetter, (nor) within four degrees on the mother's side." Gautama IV. 1-5; Manu III. 4. 12; Apastamba II. 5. 11. 16.

"(The father) may give away the girl, having decked her with ornaments, pouring out a libation of water: this is the wedding (called) Brahma. A son borne by her brings purification to twelve descendants and to twelve ancestors on both (the husband's and the wife's sides)."

"He may give her, having decked her with ornaments, to an officiating priest, whilst a sacrifice with the three (Srauta) fire is going on: this (is the wedding called) Daiva. (A son) brings purification to ten descendants and ten ancestors on both sides."

"They fulfil the law together: this (is the wedding

called) Prajapatya. (A son) brings purification to eight descendants and to eight ancestors on both sides."

"He may marry her, after a mutual agreement has been made (between the lover and the damsel): this (is the wedding called) Gandharva."

"He may marry her after satisfying (her father) with money: this (is the wedding called) Asura."

"He may carry her off while (her relatives) sleep or pay no attention: this (is the wedding called) Paisacha."

"He may carry her off, killing (her relatives) and cleaving (their) heads while she weeps and they weep: this (is the wedding called) Rakshasa." Asvalayana Griha Sutra I. 6. 1-8.

"Among these (eight rites) the four first (named) are (lawful) for a Brahamana. Among these also each earlier named is preferable. Among the (four) later (named rites) each succeeding one is more sinful (than the preceding ones)."

"Among these the sixth and the seventh agree with the law of the Kshatriyas. For power is their attribute. The fifth and the eighth (are lawful) for Vaisyas and Sudras. For Vaisyas and Sudras are not particular about their wives. Because they are allowed (to subsist by) husbandry and service."

"Some recommend the Gandharva rite for all (castes), because it is based on mutual affection." Baudhayana I. II. 20. 10-16.

"The Veda declares, 'The quality of the offspring depends on the quality of the marriage rite.' Now they quote also (the following verses): 'It is declared that a female who has been purchased for money is not a wife. She can not (assist) at sacrifices offered to the

gods..... Kasyapa has stated that she is a slave. Those wicked men who, seduced by greed, give away a daughter for a fee, who (thus) sell themselves and commit a great crime, fall (after death) into a dreadful place of punishment and destroy their family down to the seventh (generation). Moreover they will repeatedly die and be born again. All (this) is declared (to happen) if a fee (is taken)." Baudhayana I. II. 21. 1-3.

"A father who knows the law should not receive any gift in giving his daughter in marriage ; for a man who through cupidity receives such a gratuity is considered to have sold his daughter. When through mental aberration the parents take possession of the goods of a woman, her carriages or her garments, those wicked ones descend into hell. Some learned persons say that the present of a cow or a bull made by the bridegroom in the marriage ceremony according to the custom of the saints, is a gratuity made to the father ; but this is a mistake ; any gift whether small or large, received by the father in giving his daughter in marriage, constitutes sale. When the parents do not take for themselves the presents meant for the young girl, this is not sale ; this is simply gallantry shown to the young wife and evidence of affection. The married women should be loaded with considerations and presents by their fathers, brothers, husbands, brothers of their husbands, if they desire a great posterity. Where the women are honoured, there the gods are satisfied ; but where they are not honoured, all the pious acts are in vain. It is not long before the whole family is extinguished where the women live in affliction ; but

when they are not unhappy, the family increases and prospers under all circumstances." Manu III. 53-57.

Though the Aryas knew the baneful effect of in-breeding, yet in the urge of the racial increase and expansion for the preservation of the Arya ascendency in the midst of overwhelming non-Aryan population, they soon lost sight of the dynamic impulsion of progress in the natural sexual selection, and the marriage instead of being based on mutual desire, became simply alliances of the families concerned, and it degenerated into the early betrothal system when neither the bride nor the bridegroom is yet fitted physically or mentally for parenthood. Naturally race has degenerated. Of course the causes have been complex. Romantic love is more or less of recent growth, is ephemeral, and may prove dangerous if it is not confined within the necessary eugenic precautionary restrictions which the conservative instinct of the society is yet performing unconsciously. Conjugal love aided by filial attachment is yet the main-stay of the social preservation and has been the bulwark of hoary and monumental Egypt, brilliant Greece, mighty Rome, ever-youthful Cathay and immortal Aryabharta. But precocious sexual congress not only saps the vitality of the race, but deteriorates it fundamentally, physically and mentally. And it has been added by intermingling of the bloods of divergent ethnic stocks and cultural levels without bringing complete fusion of them as yet.

However of all ancient countries India had the most pronounced development of the 'romantic love' as is amply testified by the system of 'Syambara' and the 'Gandharva' marriage, and the beautiful tales of Deva-

jani and Yayati, Sakuntala and Dusanta, Nala and Damayanti and others. And the right of the Arya woman to select her own husband was for a long time honoured. We know when Visma wanted Amba the eldest daughter of the king of Kasi to marry the Kourava king Vichitravirya of Hastinapur, she said to assembled guests : "I have already in my heart selected king Salya as my husband and he has also appealed to me ; my father as well heartily desires it. What shall I say more ? Personally in the great assemblage I offered my hand in my heart to the great king Salya. Taking all this into consideration do what is just and what pleases you." Adi-Parva 102. And Amba was allowed to marry the choice of her heart.

"Be queen with thy father-in-law. (Rig-veda X. 85. 46)·····I seize thy hand for the sake of happiness, for the sake of happiness. (Rig-veda X. 85. 36)·····This am I, that art thou ; that art thou, this am I ; the heaven I, the earth thou ; the Rik art thou. the Saman I. So be thou devoted to me. Well ! let us here marry. Let us beget offspring. Let us acquire many sons who may reach old age." Sankhayana Grihya Sutra I. 13. 1-4.

"Through a period of three nights they shall eat no saline food ; they shall sleep on the ground ; through one year they shall refrain from conjugal intercourse, or through a twelve nights or of six nights or atleast of three nights." Paraskara Grihya Sutra I. 8. 21.

"After he has led her to his house, he should cohabit with her after each of her monthly periods, or as he likes, because it has been said, 'May we have intercourse as we like, until a child is born'." Paraskara Grihya Sutra. I. II. 7-8.

"Let him give his daughter whilst she is still young, to a man who has not broken the vow of chastity and who possesses good qualities, or even to one destitute of good qualities; let him not keep (the maiden) in (his house) after she has reached the age of puberty. He who does not give away a marriageable daughter during three years doubtlessly contracts a guilt equal to (that of) destroying an embryo. Such will be the case if anybody asks her in marriage and also if nobody demands her. Manu has declared that each appearance of the menses (the father incurs the guilt of) a mortal sin. Three years let a marriageable damsel wait for the order of her father. But after (that) time let her choose for herself in the fourth year a husband (of) equal (rank.) If no man (of) equal (rank) be found, she may take even one destitute of good qualities."

"If a damsel has been abducted by force and has not been wedded with sacred texts, she may lawfully be given to another man; she is even like a maiden. If after (a damsel) has been given away or even after (the nuptial sacrifices) have been offered, the husband dies, she who (thus) has left (her father's house) and has returned, may be again wedded according to the rule applicable to second weddings, provided the marriage has not been consummated."

"He who does not approach during three years, a wife who is fit for motherhood, incurs without doubt, a guilt equal to that of destroying an embryo. But the ancestors of that man who does not approach his wife who bathed after her temporary uncleanness, though he dwells near her, lie during that month in the menstrual excretions. They declare that the guilt of

the husband who does not approach his wife in due season, of him who approaches her during her temporary uncleanness and of him who commits an unnatural crime (with her) is equally (great)." Baudhayana IV. I. 11-19.

The uncleanliness during menstruation is ascribed to a Vedic legend. It is also found in the Zend Avesta. However the primitive mind tried to explain the phenomenon, the isolation of the woman of that inflorescence period is due to the natural human instinct of repugnance to the excretory product, and experience must have taught that repose and rest for that time was beneficial to the woman. In Zend-Avesta it is ascribed to the wickedness of Ahriman. (Fargard I. 18-19).

"O maker of the material world, thou holy One! If there be in the house of a worshipper of Mazda a woman who has an issue of blood, either out of the ordinary course or at the usual period, what shall the worshippers of the Mazda do? Ahura Mazda answered: 'They shall clear the way.....lest her look fall upon the fire.' O Maker of the material world, thou Holy One! How far from the fire? How far from the water? How far from the consecrated bundles of 'baresma'? How far from the faithful?

Ahura Mazda answered: 'Fifteen paces from the fire, fifteen paces from the water, fifteen paces from the consecrated bundles of barešma, three paces from the faithful' .....If she still see the blood after three nights have passed, she shall sit in the place of infirmity until four nights have passed." Fargard XVI. 1-8.

"Vsvavarupa, son of Tvastar, was a domestic priest

of the Gods, and the sister's son of the Asuras. He had three heads, one of which drank Soma, one Sura and one which ate food. He promised openly the share to the Gods, secretly to the Asuras. Men promise openly the share to every one ; if they promise any one secretly, his share is indeed promised. Therefore Indra was afraid (thinking), 'Such an one is diverting the sovereignty (from me).' He took his bolt and smote off his heads. (The head) which drank Soma became a hazelcock ; (the head) which drank Sura a sparrow ; (the head) which ate food a partridge. He seized with his hand the guilt of slaying him and bore it for a year. Creatures called out upon him, 'Thou art a Brahman slayer.' He appealed to the Earth. 'Take a third part of my guilt.' She said, 'Let me choose a boon. I deem that I shall be overcome by digging. Let me not be overcome by that.' He replied, 'Before a year is out it will grow up for thee.' Therefore before the year is out the dug-out portion of the Earth grows up again, for that is what she chose as a boon. She took a third of his guilt. That became a natural fissure ; therefore one who has piled up a fire-altar and whose deity is Faith should not choose a natural fissure, for that is the colour of guilt. He appealed to the Trees, 'Take a third part of my guilt.' They said, 'Let us choose a boon. We deem that we shall be overcome by pruning. Let us not be overcome by that.' He replied, 'From pruning shall more (shoots) spring up for you.' Therefore from the pruning of trees more (shoots) spring up, for that was what they chose as a boon. They took a third part of his guilt, it became sap ; therefore one should not partake of sap, for it is the

colour of guilt. Or rather of the sap which is red or which comes from the pruning one should not partake, but of other sap at will. He appealed to a concourse of women, 'Take the third of my guilt.' They said, 'Let us choose a boon ; let us obtain offspring from after the menses ; let us enjoy intercourse at will up to birth.' Therefore women obtain offspring from after the menses and enjoy intercourse at will up to birth, for that is what they chose as a boon. They took a third of his guilt, it became (a woman) with stained garments ; therefore one should not converse with (a woman) with stained garments, one should not sit with her, nor eat her food, for she keeps emitting the colour of guilt." Taittirya Sanhita II. 5-1.

"A woman is purified by her monthly discharge, a river by its current, brass by (being scoured with) ashes and an earthen pot by another burning." Vasistha III. 58.

"A woman is not defiled by a lover.. ...Women (possess) an unequalled means of purification ; they never become entirely foul. For month by month their temporary uncleanliness removes their sins." Vasistha XXVII. 1-4 ; Baudhayana II. 2. 4. 4.

Intermarriage was permitted. Yayati a Kshatriya married Devayani a Brahman girl. Santanu a Kshatrya married Satyavati, a fisherman's daughter. Bhimsena married a Rakshasa woman Hiramba. Mixed castes (varna-sankaras) originated from mesalliances. (Gautama IV. 16-28). However there was a slight penance to have intercourse with a non-Aryan woman : "He who cohabits with a non-Aryan woman, he who lends money at interest, he who drinks (other) spirituous liquors (than

Sura), he who praises every body unworthy of a Brahmana, shall sit on grass, allowing his back to be scorched (by the sun)." Apasatamba I. 9. 27. 10.

"The inhabitants of Avanti, of Anga, of Magadha, of Surastra, of the Daksin, of Upavrit, of Sindh and the Sauviras are of mixed origin. He who has visited the (countries of the) Arattas, Karaskarras, Pundras, Sauviras, Vangas, Kalingas (or) Pranunas shall offer a Punastoma or a Sarvaprishtha." Baudhayana I. I. 2. 13-14.

There is nothing strange that the Punjab which was the country of the Arattas and Sauviras (Multan District) should be called non-Aryan, for many barbarous foreign tribes poured through the northern gate as the Yavanas, Sakas, Pahalavas and Hunas and Vasistha (I. 8. 8-2) also defines Aryavarta excluding the Punjab :

"The country of the Aryas (Aryavarta) lies to the east of the region where (the river Sarasvati) disappears, to the west of the Black-forest, to the north of the Paripatra (mountains), to the south of the Himalaya. (According to others it lies to the south of the Himalaya) and to the north of the Vinḍaya range. Acts productive of spiritual merit and customs which (are approved of) in that country, must be everywhere acknowledged (as authoritative) ; but not different ones of (of countries where) laws opposed (to those of Aryavarta prevail). Some declare the country of the Aryas to be situated between the (rivers) Ganga and the Yamuna."

However it seems wherever the Aryas lived, they were respected and honoured as befitting an Arya. Thus we find Vagadatta king of Kalinga, Tamralipta

and Pattan is announced as a welcome suitor in the Svayañgvara of Draupadi. (Adi-parva 117).

"Both the husband and the wife have power over (their) common property." Apastamba II. II. 29. 3. But 'means of subsistence (vritti) or jewellery constitutes what is called the (exclusive) property of a woman. Means of subsistence valued at above two thousand shall be endowed (on her name). There is no limit to jewellery. In calamities, disease and famine in warding off dangers and in charitable acts, the husband too may make use of this property. Neither there shall be any complaint against the enjoyment of this property by mutual consent.....by those who are wedded in accordance with the customs of the first four kinds of marriage."

"On the death of her husband a woman, desirous to lead a pious life, shall at once receive not only her endowment and jewellery, but also the balance of Sulka due to her. If both of these things are not actually in her possession, though nominally given to her, she shall at once receive both of them together with interest. If she is desirous of a second marriage (kutumbakama) she shall be given on the occasion of her remarriage (nivesakale) whatever either her father in-law or her husband or both had given to her." Kautilya's Arthasastra III. 2.

Adultery was a serious offence and was punished according to the gravity of the circumstance.

"If he has actually committed adultery, the organ shall cut off together with the testicles. But (if he has had intercourse) with a (marriageable) girl, his property

shall be confiscated and he shall be banished." Apastamba II. 10. 26. 20-21.

"He who has had connection with a Guru's wife shall cut off his organ together with the testicles, take them into his joined hands and walk toward the south without stopping, until he falls down dead. Or he may die embracing a heated metal image of a woman." Apastamba I. 9. 25 ; I. 10. 28. 15. "He shall embrace the red-hot iron image of a woman." Gautama XXIII. 19.

"Anybody but a Brahman shall suffer corporal punishment for adultery. The wives of all castes must be guarded more carefully than wealth. But corporal punishment (shall) not (be inflicted) for (adultery with) the wives of the ministrels and those who appear on the stage. For (the husbands) carry them (to other men) or lying concealed permit them to hold culpable intercourse."

"Women possess an unrivalled means of purification ; they never become (entirely) foul. For month by month their temporary uncleanliness removes their sins. Soma gave them cleanliness, the Gandharva their melodious voice and Agni purity of all ; therefore women are free from stains." Baudhyana II. 3. 4. 1-5.

"A Kshatrya who commits adultery with an unguarded Brahman woman shall be punished with the highest amercement ; a Vaisya doing the same shall be deprived of the whole of his property ; and a Sudra shall be burnt alive wound round in mats. Whoever commits adultery with the queen of the land shall be burnt alive in a vessel. A man who commits adultery with a woman of low caste shall be banished

with the prescribed mark branded on his forehead, or shall be degraded to the same caste. A Sudra or a Svapaka who commits adultery with a woman of low caste shall be put to death while the woman shall have her ears and nose cut off. Adultery with a nun (pravrajita) shall be punishable with a fine of 24 panas while the nun who submits herself shall pay also a similar fine. A man who forces his connection with a harlot shall be fined 12 panas .....When a man has connection with a woman against the order of nature (a-yanau=sodomy) he shall be punished with the first amercement. A man having sexual intercourse with another man shall also pay the first amercement. When a senseless man has sexual intercourse with beasts he shall be fined 12 panas." Kautilya's Arthasastra IV. 13.

"If a woman either brings forth no (live) children, or has no male issue or is barren, her husband shall wait for eight years. If she bears only a dead child, he has to wait for ten years. If she brings forth only females, he has to wait for twelve years. Then if he is desirous of having sons, he may marry another. In case of violating this rule, he shall be made to pay her not only sulka, her property (stridhana) and an adequate monetary compensation, but also a fine of 24 panas to the Government." Kautilay Arthasastra III. 2; Manu IX. 81.

"But one that is sick and of good and virtuous conduct can never be replaced by another without her consent and should never be treated with contempt." Manu IX. 82.

"A woman hating her husband, can not dissolve her

marriage with him against his will. Nor can a man dissolve his marriage with his wife against her will. But from mutual enmity divorce can be obtained." Kautilya's Arthasastra III. 3.

"If a husband either is of bad character or is long gone abroad, or has become a traitor to his king or is likely to endanger the life of his wife or has fallen from his caste or has lost virility, he may be abandoned by his wife." Kautilya's Arthasastra III. 2.

"And she is called remarried (punarbhu) who leaving an impotent, outcast or mad husband or after the death of her husband takes another lord." Vasistha XVII. 20.

"Wives……should wait as long as a year for their husbands who have gone abroad for a short time; but if they are such as have given birth to children, they should wait for their absent husbands for more than a year. If they are provided with maintenance they should wait for twice the period of time just mentioned. If they are not provided with, their well-to-do 'gnatis' should maintain them either for four or eight years…If the husband is a Brahman studying abroad, his wife who has no issue should wait for him for ten years but if she has given birth to children, she should wait for twelve years." (Gautama XVIII. 17)……"If the wife of the absent husband lacks maintenance and is deserted by well-to-do 'gnatis,' she may remarry one whom she likes and who is in a position to maintain her and relieve her misery."

"A virgin-wife (kumari) who is wedded in accordance with the customs of the first four kinds of marriage and whose husband is gone abroad and is heard of shall wait for him for the period of seven menses, provided

she has not publicly announced his name; but she shall wait for him a year in case of her having announced the name of her absent husband who is heard of .....Then with the permission of the judges (dharmaasthairvisrishta), she may marry any one she likes: for neglect of intercourse with wife after her monthly ablution is, in the opinion of Kautilya, a violation of one's duty." Kautilya's Arthsastra III. 4.

Widow marriage was permitted, especially in the Vedic and the Brahmana and Sutra periods.

"Go up, O woman to the world of the living; thou liest by this one who is deceased: come! to him who grasps thy hand, thy second spouse, thou hast now entered into the relation of wife to husband." Rig-veda X. 18. 8; Atharva-veda XVIII. 3-2.

"A woman whose husband is dead and who desires offspring (may bear a son) to her brother-in-law. Let her obtain the permission of her Gurus (guardians) and let her have intercourse during the proper season only. (On failure of a brother-in-law she may obtain oflspring) by (cohabiting with) a Sapinda, a Sagotra, a Samanapravara, or one who belongs to the same caste. Some say (that she shall cohabit) with no body but a brother-in-law. (She shall) not (bear) more than two (sons). The child belongs to him who begat it, except in the agreement (to the contrary has been made). (And the child begotten at) a living husband's (request) on his wife (belongs to the husband)." Gautama XVIII. 4-11.

"("The widow) may seek to raise up offspring (to her deceased husband). (A son) begotten on a (widow) whose husband's brother lives, by another, is excluded from inheritance". XXVIII. 22-23; Vasistha XVII. 79.

"He who defiles a maiden of equal caste before she has reached her maturity shall have his hand cut off or pay a fine of 400 panas ; if the maiden dies in consequence, the offender shall be put to death. He who defiles a maiden who has attained maturity shall have his middle finger cut off or pay a fine of 200 panas, besides giving an adequate compensation to her father."

"No man shall have intercourse with any woman against her will. He who defiles a willing maiden shall pay a fine of 54 panas, while the maiden herself shall pay a fine of half the amount. He who has connection with a maiden that has passed seven menses and has not yet succeeded in marrying her, though she has been betrothed to him, shall either be guilty or pay any compensation to her father.....When a woman being desirous of intercourse yields herself to a man of the same caste and rank, she shall be fined 12 panas, while any other woman who is an abetter in the case shall be fined twice so much. Any woman who abets a man in having intercourse with a maiden against her will, shall not only pay a fine of 100 panas, but also please the maiden with an adequate nuptial fee." Kautilya's Arthasastra IV. 12.

"A Sudra who intentionally reviles twice-born men by criminal abuse, or criminally assaults them with blows, shall be deprived of the limb with which he offends. If he has criminal intercourse with an Aryan woman, his organ shall be cut off and all his property confiscated.....(The value of) property which a Sudra unrighteously acquires by theft, must be repaid eightfold. If a learned man offends, the punishmeut shall be very much increased.....The award of the

punishment (must be regulated) by consideration (of the status) of the criminal, of his (bodily) strength, of (the nature of) the crime and whether the offence has been repeated." Gautama XII. 1-52.

"Great criminals shall be put to death. In the case of Brahmanas no corporal punishment must be inflicted. A Brahmana must be banished from his country, his body being branded. For murdering another Brahmana let (the figure of) a headless corpse be impressed on his forehead; for drinking spirit, the flag of the seller of the spiritous liquor; for stealing a dog's foot; for incest (the mark of) a female part.....

Let the king put to death those who forge royal edicts; and those who forge private documents; likewise poisoners, incendiaries, robbers, and killers of women, children or men.....Vishnu or breakers of dikes." Vishnu V. 1-15.

Justice is the protection of the king. "The king who punishes the innocent and does not chastise those who deserve punishment, becomes covered with ignomy and goes to hell after death." Manu VIII. 128.

"The king in whose kingdom there is no thief, adulterer, nor defamator, nor one of violent actions nor bad manners goes to the region of Sakra (Indrapuri=heaven) after death." Manu VIII; Vishnu V. 196.

"When a person causes abortion in pregnancy by striking or with medicine or by annoyance, the highest, middlemost and first amercements shall be imposed respectively.....When a person supplies murderers or thieves with food, dress, any requisites, fire, information, any plan, or assistance in any way, he shall be

punished with the highest amercement. When he does so under ingnorance, he shall be censured. Sons or wives of murderers or thieves shall, if they are found not in concert, be acquitted.....He who castrates a man shall have his generative organ cut off. He who hurts the tongue or the nose of another shall have his finger cut off." Kautilya's Arthaśastra IV. 11.

"Any physician who undertakes to treat in secret a patient suffering from ulcer or excess of unwholesome food or drink. as well as the master of the house (wherein such treatment is made) shall be innocent only when they (the physician and the master of the house) make a report of the same to either Gopa or Sthanika otherwise both of them shall be guilty with the sufferer." K. A. II. 36.

"Physicians under taking medical treatment without intimating (to the government) the dangerous nature of the disease shall, if the patient dies, be punished with the first amercement. Growth of disease due to negligence or indifference of a physician shall be regarded as assault or violence." Kautilya's Arthasastra IV. 1.

"All physicians and surgeons who exercise their trade badly deserve a fine ; it should be of the first degree in respect to animals and second degree to man." Manu IX. 284.

This is the general outline of the Hindu Code of Law. Nor minute legal technicalities were lacking. Even as early as the sixth century B.C. there were a series of judicial officers—justices, lawyers, rehearser of the law maxims, the council of representatives of the eight clans (republics of the Sakya clans), the general,

the vice-consul and the consul himself to him successively, in criminal causes, appeals lay for the defendant but not for the accuser. The consul's decision was based on a book of precedents, written or oral.' (American Law Review, May-June 1908). Rhys Davids in his 'American Lectures 1895-1896' said of the Parajikas, especially of the Sutta Vibhanga: "These are sometimes of very historical value. The discussions for instance (in rules as to murder and theft) of what constitutes murder and what constitutes theft, anticipate in a very remarkable degree the kind of fine drawn distinctions found in modern law books. These passages, when made accessable to Western scholars, must be of the greatest interest to the student of history, as they are quite the oldest documents of that particular kind in the world."

But the ancient Hindus were not a litigous people. Criminal acts of violence were rare as it is even to-day under great stress of famine, poverty and deprivation. In days of yore, there was plenty for all. The people were of deeply religious temper and the land was vast and extensive for racial expansion.

Megasthenes, the shrewd Greek observer in the court of Chandra Gupta (321-296 B. C.) remarks the same:

"The Indians neither put out money at usery, nor know how to borrow. It is contrary to established usage for an Indian either to do or suffer a wrong, and therefore they neither make contracts, nor require securities." Frag. XXVII. B.

"Among the Indians one who is unable to recover a loan or deposit has no remedy at law. All that the

creditor can do is to blame himself for trusting a rogue." Frag. XXVII. C.

"The Indians all live frugally, especially when in camp. They dislike a great undisciplined multitude, and consequently they observe good order. Theft is of very rare occurence. Megasthenes says that those who were in the camp of Sandrakottos (Chandra-Gupta), wherein lay 400,000 men, found that the thefts reported on any one day did not exceed the value of two hundred drachmae·····The simplicity of their laws and their contracts is proved by the fact that they seldom go to law. They have no suits about pledges or deposits nor do they require either seals or witnesses, but make their deposit and confide in each other. Their houses and their property they generally leave unguarded····· Truth and virtue they hold alike in esteem. Hence they accord no special privileges to the old unless they possess superior wisdom·····A person convicted of bearing false witness suffers mutilation of his extremities. He who maims only any one not only suffers in return the loss of the same limb, but his hand also is cut off." Frag. XXVII ; Strabo XV. I, 53-56.

"The inhabitants, in like manner, having abundant means of subsistence, exceed in consequence the ordinary stature, and are distinguished by their proud bearing. They are also found to be well-skilled in arts as might be expected of men who inhale a pure air and drink the very finest water. And while the soil bears on the surface all kinds of fruits which are known to cultivation, it has also under ground numerous veins of all sorts of metals, for it contains much gold and silver, and copper and iron in no small quantity, and even tin

and other metals, which are employed in making articles of use and ornament, as well as the implements and accoutrements of war. In addition to cereals, there grows throughout India much millet, which is kept well watered by the profusion of the river-streams, and much pulse of different sorts, and rice also, and what is called 'bosporum', as well as many other plants useful for food, and which most grow spontaneously. The soil yields, moreover, not a few other edible products fit for the subsistence of animals, about which it would be tedious to write. It is accordingly affirmed that famine has never visited India and that there has never been a general scarcity in the supply of nourishing food." Fag. I.

The tooth-for-tooth clauses of the Hindu Law strikingly resemble the Hammurabi code which is the oldest code yet found, as the Egyptian Law Book to which Diodorus Siculus (57 B.C.) alludes seems to be lost. However they might have been independently developed as the mental frame-up of the ancient world was very similar. Or it is probable that the Aryas that came from Mesopotamia to Dharavati might have brought them with them and later they were modified and adapted to the religious principles of Aryavarta. But it seems almost certain, that the Laws of Moses, especially the oldest part of it which (Exodus XXIV. 7) called the Book of Covenant, is borrowed directly from the Babylonian Code (Hammurabi), for parallelism is too intimate, deep and basically fundamental to be explained by mere accidental resemblance. The Decalogue (Exodus XX. 1-17), the Deuteronomic Code (Deut. XII-XXVI) and the Holiness Code (Lev. XI-XXVII) are

decidedly of later origin and increment and so acknowledged by all Biblical scholars.

The following are the manifest similarities between the Code of Hammurabi and the Code of the Covenant, and the underlying sense of unity is apparent everywhere.

Hammurabi 117 : Exodus XXII. 2 ; H. 280 : Ex. XXI. 8-11 ; H. 206-208 : Ex. XXI. 12-13 ; H. 195 : XXI. 15 ; H. 192 : Ex. XXI. 17 ; H. 14 : Ex. XXI. 16 ; H. 206 : Ex. XXI. 18-19 ; H. 209-210 : Ex. XXI. 22 ; H. 196-197, 200 : Ex. XXI. 23-25 ; H. 263, 199 : Ex. XXI. 26-27 ; H. 250 : Ex. XXI. 28 ; H. 251 : Ex. XXI. 29-31 ; H. 252 : Ex. XXI. 32 ; H. 21 : Ex. XXII. 2-3 ; H. 57 : Ex. XXII. 5 : H. 125 : Ex. XXII. 7-8 ; H. 124, 126 : Ex. XXII. 9 ; H. 9 : Ex. XXII. 10-11 ; H. 266 : Ex. XXII. 12 ; H. 267 : Ex. XXII. 13 ; H. 244, 263 : Ex. XXII. 14 ; H. 130 : Ex. XXII. 16 ; H. 241 : Ex. XXII. 26 ; H. 3-5 : Ex. 1-3, 7-8.

As chronologically the Hammurabi code could not be borrowed from the Mosaic Law, the conclusion is inevitable that the Laws of Moses were borrowed from the Babylonian Code of Hammurabi, if not from an older Summerian or Accadian Code from which both have received the materials.

APPENDIX A. Page 158.

SANSKRIT.	ZEND.	GREEK.	LATIN.	TEUTON.	SLAV.	CELT.	ENGLISH.
			Family.				
Pitar	Pitar	Pater	Pater	Fadar	Deest	Athir	Father
matar	matar	mater	mater	muotar	mater	mathir	mother
sunu	hunu	yios	...	sunu	synu	...	son
duhitar	dughdhar	thygater	...	dauhtar	duster	...	daughter
bhratar	bratar	phrater	frater	brothar	bratru	brathir	brother
svasar	hvanhar	...	soror	svistar	sestra	siur	sister
pitrivaya	...	patros	patruus	fataro	...	...	uncle
svasura	hvasura	ekyros	socer	svairan	svekru	hvigeren	father-in-law
svasru	...	ekyra	socrus	svaihro	svekruvi	hveger	mother-in-law
jamatar	zamatar	gambros	gener	...	gener	dawf	son-in-law
snusha	sunhar	nyos	nurus	snur	snucha	...	daughter-in-law
devar	khosra	daer	levir	tacor	deveri	...	brother-in-law

SANSKRIT	ZEND.	GREEK.	LATIN.	TEUTON.	SLAV.	CELT.	ENGLISH.
nanandar	...	galos	gloss	...	zluva	...	sister-in-law
pati	paiti	posis	potis	fath	pats	...	husband
patni	...	potnia	...	...	pati	...	wife-lady
napat	napat	nepodes	nepos	nithji	netij	nie	grandson
napti	napti	...	...	nithjo	neter	necht	grand-daughter
yataras	...	einateres	...	janitrices	...	jetri	wives of husband's brothers
syala	...	aelol	...	...	...	...	wife's brother
vidhava	veva	eitheos	vidua	vidubo	vidova	fedb	widow
arbhaka	...	orphanos	orbus	arbi	...	arbe	orphan
ganas	...	genos	genus	kuni	...	...	kin-family
			Domestic animals.				
pasu	pasu	...	pecus	faihu	peku	...	cattle
payu	payu	poimen	...	...	pemu	...	shepherd
go	gao	boys	bos	chuo	gow	...	cow
ukshan	ukshan	tayros	taurus	auhsa	taru	tarb	bull
vatsa	...	italos	vitulus	...	tele	fithal	calf

SANSKRIT.	ZEND.	GREEK.	LATIN.	TEUTON.	SLAV.	CELT.	ENGLISH.
			Domestic animals.—(*Contd.*)				
stari	...	steira	sterilis	stairo	...	...	heifer
avi	...	ois	ovis	avistr	ovica	oi	sheep
aga	...	aix	...	...	ozka	...	she-goat
sukuara	hu	ys	sus	svein	svinija	hwch	swine
svan	span	kyon	canis	hund	szun	cu	dog
asva	aspa	ippos	equus	ehu	aszva	ech	horse
putra	puthra	polos	pullus	fula	...	...	foal
			Wild animals.				
riksha	...	arktos	ursus	...	...	arth	bear
vrika	vehrka	lykos	lupus	vulfs	vluka	fael	wolf
sasa	...	...	...	...	sasins	ceinach	hare
mush	...	mus	mus	mus	mysi	...	mouse
krimi	kerema	...	...	...	cruvi	cruim	worm
ahi	ayhi	echis	anguis	une	...	...	serpent
sarpa	...	erpeton	serpens	...	...	sarff	serpent
udra	...	ydra	...	otter	vydra	...	snake

SANSKRIT.	ZEND.	GREEK.	LATIN.	TEUTON.	SLAV.	CELT.	ENGLISH.
			Birds.				
vi	vi	oi-ovos	avis	...	...	...	birds
hansa	...	khen	anser	kans	gasi	geiss	goose
ati	...	nessa	anas	anut	antis	...	duck
kokila	...	kokkyx	cuculus	kuckuk	kukavica	cauch	cuckoo
karava	...	korax	corvus	hraban	kruk	cru	raven
vartika	...	orty	...	wahtala	...	...	quail
uluka	...	ololygia	ulucus	...	...	...	owl
			Home.				
dama	...	domas	domus	timrjan	domu dam	...	house
vis, vesa	vis	oikos	vicus	veihs	visi	fich	house
vastu	vanh	astu	...	wist	...	aross	dwelling
dhaman	daman	...	familia	...	...	...	settlement
pur	...	polis	...	...	...	...	town
dvar	dvara	thura	fores	daur	dviri	dorus	door
stara	stairis	stroma	torus	strao	straje	strath	bed

SANSKRIT.	ZEND.	GREEK.	LATIN.	TEUTON.	SLAV.	CELT.	ENGLISH.
			Home.—(*Contd.*)				
ata	aithya	...	antae	andar	...	...	door-post
dehi	...	teikhos	feihuss	...	...	...	wall
pathas	path	patas	...	fad	pati	...	path
nauka	navi	nays	navis	nacho	...	nau	boat
aritras	...	eretmos	remus	ruodar	irklas	ram	rudder
			Home occupations.				
takshan	tashan	tekton	...	...	...	...	carpenter
dru, daru	wood	dru drus	...	triu	drevo	daur	beam
pak	pak	pesso	coquo	...	peka	pobi	to cook
bhragg	biristhan	phrygo	frigo	...	...	bairgen	to roast
kravis	krividru	kreas	caro	hreo	kruvi	cruu	raw flesh
mansa	...	...	...	mimz	meso	mir	meat
asthi	asti	osteon	os	...	...	asgwrn	bone
maggan	mazga	...	...	marg	mozgu	...	marrow
yusha	yoshidam	zomos	jus	...	jucha	...	juice

SANSKRIT.	ZEND.	GREEK.	LATIN.	TEUTON.	SLAV.	CELT.	ENGLISH.
Home occupations.—(*Contd.*)							
madhu	madhu	methy	...	metu	medu	mid	honey
kri, krit	kar	kairo	curtus	hairu	...	...	to cut
kriti	...	...	cortex	...	karne	...	skin
agina	...	aigis	...	...	jazno	...	goat-skin
ura-bhra	...	eiros	vellus	vulla	vluna	gwlan	wool
tan	tan	teino	tendu	thanjâ	teneto	tana	to stretch
prik	pechidan	pleko	pliko	flahta	pleta	...	to plat
tarku	...	atraktos	torques	...	...	...	to spin
vayami	vap	etrion	vieo	weban	viti	feith	to weave
sthavi	...	istos	stamen	...	stakli	...	weaver
nah	...	neo	neo	naan	...	snathe	to sew
rag, ragta	...	rezo, regos	...	...	...	...	to dye
vas, vastra	vastra	eithes	vestis	vasti	...	gwisg	dress
pish	pish	...	pistor	...	piseno	...	to pound
dih	diz	thiggano	fingo	deiga	...	...	to knead
pis	paesanth	poikilos	pingo	filu-faihs	...	...	to paint
visha	visha	ios	virus	...	...	fi	poison

SANSKRIT.	ZEND.	GREEK.	LATIN.	TEUTON.	SLAV.	CELT.	ENGLISH.
			Trees and Plants.				
bhurga	...	...	...	bircha	breza	...	birch
deest	buk	phegos	fagus	buohha	...	...	beech
dru, devadaru	dru	drys	larix	triu	drevo	daur	fir
vetasa	vaeti	itea	vitis	vida	vyti	gwden	withy
kalama	qalam	kalamos	culmus	halm	...	kalaf	reed
sana	kanaw	kannabis	cannabis	hanaf	konef	canaib	hemp
kshuma	...	linon	linum	lein	linu	lin	flax
			Agriculture.				
arya	airya	arou	arare	arjan	orati	arathar	to plough
ira, urvara	urvara	era	arvum	airtha	ploughed	earth, land-holder	produce
sita	...	sao	sero	saian	seme	seme	to sow
agra	azra	agros	ager	akr-s	...	...	field
ratha	ratha	...	rota	rad	rata	roth	wheel, cart
chakra	kakhra	kuklos	circus	hveohl	...	...	wheel
yuga	yogh	zgon	jugum	juk	igo	iau	yoke

SANSKRIT.	ZEND.	GREEK.	LATIN.	TEUTON.	SLAV.	CELT.	ENGLISH.
			Agriculture.—(*Contd.*)				
vahana	vasha	okhos	vehiculum	wagan	vozu	fen	waggon
aksha	...	axon	axis	ahsa	osi	echel	axle
dhana	dana	...	...	...	duna	...	corn
girna, kurna	zarai	gyris	granum	kaurn	zruno	gran	ground corn
malana	mele	myle	mola	malan	melza	melim	to grind
yava	yava	zeiai	...	gersta	...	...	barley
			Seasons.				
vasanta	vanhara	ear	ver	var	vasara	gwanwyn	spring
sama	hama	trienos	...	sumar	...	sam	summer
sarat	saredha	karpos	ceres	herbist	...	...	autumn
hima	zyam	kheimon	hiems	...	zima	gem	winter

Weapons and Metals.

Parasu Perusu Pelekus—weapons of bone. Asthi in sanskrit bone; in Zend asti means arrow.

Dru in sanskrit means wood; dru in Zend and dory in Greek means spear.

Asan and Asman in sanskrit means stone; asan in Zend millstone; in greek akon meaning hammer.

SANSKRIT.	ZEND.	GREEK.	LATIN.	TEUTON.	SLAA.	CELT.	ENGLISH.
Weapons and Metals.—(*Contd.*)							
aman (stone)	...	asman	akmon	...	...	...	anvil
asi	...	...	...	ensi	...	...	sword
salya	...	keylon	...	...	...	...	shaft
ishu	ishu	ios	...	...	...	...	arrow
gya	gya	bios	...	...	...	...	bow-string
skhura in sanskrit means razor, in greek xyron, scraper.							
hiranya	zaranya	khloynos	...	...	...	zelenu, (yellow)	gold
ragata	ragatam	argyros	argentum	...	argat	...	silver, white
ayes	ayanh	...	aes	aiz	...	...	ore, metal
Administration.							
ganaka	...	...	...	kunig	...	...	father, king
gani	geni	gyne	quino	...	zena	...	wife, mother, queen
pati	paiti	posis	...	...	pats	...	lord
vispati	vispaiti	...	...	veszpati	...	...	lord of clan

SANSKRIT.	ZEND.	GREEK.	LATIN.	TEUTON.	SLAV.	CELT.	ENGLISH.
Administration.—(*Contd.*)							
raj	...	...	rex	reik	...	rig	king
dhaman	data	themis	...	dom (judgment)	...	...	law
riju	erezu	...	rectus	raiht	...	...	right
dis, dishta	dis	dike	judex	...	...	...	announcement
eva	...	...	...	ewa	...	...	custom
agas	...	agos	...	...	...	...	sin
kaya	kitha	tio	...	...	cena	...	penace
Body.							
chrip	kehrp	...	corpus	href	...	cri	body
asti	asti	osteon	os	...	...	asgwrn	bone
maggan	mazga(brain)	...	...	marg	mozgw	...	marrow
sira	sara	kar	cerebrum	...	...	...	head
pada	padha	poys	pes	fotu	pada	...	foot
sroni	sraoni	...	cluinis	hlaunn	szlauni	clun	hip
kaksha	kaksha	kokhone	coxa (hip)	...	...	coss (foot)	shoulder

SANSKRIT.	ZEND.	GREEK.	LATIN.	TEUTON.	SLAV.	CELT.	ENGLISH.
Body.—*(Contd.)*							
Nabhi	...	omphalos	umbilicus	nabolo	nabi	imbliu	b nabel
janu	zhnu	gony	genu	kniu	...	...	knee
parshni	pashna	pterna	...	faizna	plesna	...	heel
bahu	bazu	pekhys	...	buoc	...	...	arm
nakha	...	onyx	unguis	nagal	noguti	inga	nail
dakshina	dashina	dexios	dexter	taihsva	desinu	dess	right
as	aonh	...	os	...	...	...	mouth
nas	naonha	...	nasus	nasa	nosu	...	nose
hanu	...	genys	gena	kinnu	...	giun	jaw
danta	dantam	odoys	dens	tunthu	danti	det	tooth
bhru	brvat	ophrys	...	brawa	bruvi	brai	brow
akshi	ashi	osse	oculus	augo	oko	aged	eye
asru	asru	dakry	lakruma	tagr	...	der	tear
hridaya	zaredhaya	kardia	cor	hairto	sridice	cride	heart
plihan	spereza	splen	lien	lunga	slezena	selgy	spleen
Jakrit	jagare	epar	jecur	...	acni	...	liver
antra	...	enteron	intestinum	innadiri	jetro	inathar	intestine

SANSKRIT.	ZEND.	GREEK.	LATIN.	TEUTON.	SLAV.	CELT.	ENGLISH.
			Mental Faculties.				
manas	mananh	menos	mens	mun	minesti	memme	mind
smara	mar	mermera	memor	...	...	...	memory
vara	var	boylomai	volo	viljan	voliti	...	will
vidya	vidhya	oida	...	vait	vedeti	rofetar	knowledge
janami	zan	gnosis	gnoso	kann	znati	adgensa	(I) know
buddhi	bud	pystis	...	...	budeti	...	perception
dyaushpita	zeuspater	juppitar	zio	...	...	...	heavenly father
deva	daeva (evil demon)	theos, dios	deus	tivar	deva	dia	... god
agni	...	ignis	...	ogni	...	...	fire
bhaga	bagha	...	...	boghu	...	..	god, one of adityas
bhuranyu	...	phoruneus	...	...	...	...	giver of fire
id, ira	...	era	...	airtha	...	...	daughter of Manu
Surya	hvare	zeir	sol	suil	slunica	suil	sun
Manu	...	Minos	...	Mannus	...	...	Father of Mannus
Marut	...	Ares	Mars	...	...	...	storm-god
Usha	...	Eos	Aurora	Ostan	Auszra	...	*Goddess of dawn*

Myths.

Arguni means bright, dawn ; in Greek Argynnis name of Aphrodite.
Dasahantar killer of Dases ; in Gk. Deuphontes, a name of Beblerphon.
Dasyanari, wife of demon ; in Gk. Deianeira wife of Herakles.
Dyanisya, a heavenly god ; in Gk. Dionysos.
Deva-mata, mother of gods ; in Gk. Demeter.
varsha, rain ; in Gk. erse, dew ; Celt. frass, shower.
Sarat, harvest ; in Gk. karpos, ripe fruit ; in Latin ceres, ceresis.

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"In this booklet the author has sounded a note on the problems of Education that confront the modern intellectuals. We cannot but admire the deep insight herein displayed in touching over a wide range of principles underlying the oriental and occidental knowledge and instruction. The author—Mr. Chakraberty—it seems has dived deep into the ocean of learning and viewed with circumspection and care the various phases of the so-called Western education. His chapters on "Intellectual Fatigue," "Sexual Education," and "Female Education" are both delightful and instructive. On "Foreign Universities" he supplies information of very great interest to Indians who may be thinking of prosecuting their studies in Europe and America. The book is intensely national in its character and tone and is eminently fitted to give a pleasurable sensation and stimulus to both male and female readers. The whole crux of the ideals advocated in the book lies in the adaptation, and a happy combination of what is good and virtuous in the East and the West. For instance, the author recommends dancing as calculated to develop cadence of body and soul but depreciates the society where youth, beauty and natural gifts are bartered in the name of self-determination. An object lesson is afforded by the allusions made here and there to heroes and heroines of the world whose lives have left ineffacable impressions on the sand of time. The book is worthy of being in the hands of every educationist in this country."—**The United India and Indian States** (Jan. 17, 1923).

"The theoretical and practical aspects of education are ably and analitically treated in the book by the author. The chapters on Girls' Education, Sexual Education, National University are really thoughtful and deserve the attention of the readers."—**The Mahratta** (Dec. 27, 1923).

"In this little book of fourteen chapters the author deals with the question of education in both its theoretical and practical aspects. He takes a comprehensive view of the subject and observes—"To make the best of life, not simply in the crude sense of the enjoyment of material pleasures, but in its broadest application, should be the aim and object of education."—**The Prabuddha Bharata** (P. 315, 1923).

"This little book is well-written. Our author's suggestions about 'Sexual Education' are worth considering. The subject should not be ignored."—**The Modern Review** (Dec. 1922).

"This is a useful contribution to the educational literature." —**The Indian Review.**

"The author does not follow the beaten track and in many places challanges the orthodox methods. But he does that with the sole object of improving his fellow beings, culturally and physically. The book deserve well at the hands of the Education Department."—**The Indian Daily News** (Sep. 5, 1923).

3. Dyspepsia and Diabetes—CONTENTS :—I. Digestion, Salivary Ferments, Alimentary Absorption. II.—Liver, Pancreas. III.—Hereditary Predisposition, Dyspepsia. IV.—Diabetes, Polyglandular Theory, Lesion in Pancreas in Diabetes, Treatment. *84 pages.* **Re. 1**

"Dyspepsia and diabetes are both very common in India and the greatest pity is that educated men, brain-workers, the backbone of the nation and the noblest of the race, suffer mostly from these in the best period in their intellectual activities and resourcefulness. It is therefore highly necessary and opportune to let these gentlemen know the true causes and best preventive measure for those lethal diseases. The booklet before us gives all the general principles, the fundamental facts of dietetics and the personal and social hygiene in a clear and intelligent manner and a study of it will help in preparing a man for his self-defence against their invasion. All educated men will read the book with great profit and interest."—**The Practical Medicine** (Oct. 1923).

"The book is written by the author for the educated middle-class brain-workers who generally suffer from dyspepsia ; it deals with the prevention and treatment of Dyspepsia and Diabetes and will prove useful to the public."—**The Indian Medical Journal** (Sept. 1924).

4. A Study in Hindu Social Polity—CONTENTS :—Physical Geography of India, Ethnic Elements in Hindi Nationality, Hindu Myths, Hindi Languages, Hindi Scripts, Caste, Social Organisation. *203 pages.* **Rs. 3-6.**

"The sketches of ancient cultural history of India are interesting and valuable. The book is divided into seven chapters and the subjects treated in them are as follows : Physical Geography of India, Ethnic Elements in Hindi Nationality, Hindu Myths, Hindi Languages, Hindi Scripts, Caste, Social Organisation. This is a book which may interest Ethnologists, Philologists, Sociologists, and students of Comparative Religion. It is a store-house of historical materials".—**The Modern Review** (July, 1924).

5. An Interpretation of Ancient Hindu Medicine—CONTENTS :—Anatomy, Physiology, Pathology, Diseases and their Diagnosis, Diseases and their clinical studies, Therapeutics, Surgery, Dietetics, Hygiene. *625 pages.* **Rs. 7-8.**

"The author is well known as a writer on diverse subjects, such as Medicine, Education, Social Polity, Politics, Health, Food, etc., and in the present volume of 625 pages, he has made an attempt to place before the medical profession and the general reader carefully selected materials for a comparative study of the ancient Hindu and Greek systems of medicine in the light of modern knowledge. His contention that the ancient Greek Schools of Medicine were indebted to the Hindu system deserves careful consideration and the proofs aduced in its favour are not without foundation. The subject matter of the book deals with different departments of Medicine, such as Anatomy, Physiology, Pathology, Diagnosis and clinical studies of diseases, Therapeutics, Surgery, Dietetics and Hygiene. They have been dealt with from the point of view of *comparative study* and the author has liberally quoted original Sanskrit texts in support of his views. He has successfully shown that not an inconsiderable part of our present-day knowledge of the structure and functions of the human body and of the nature and methods of treatment of surgical diseases were known to the ancient physicians of India. Such knowledge, to our regret, has, to a large extent, passed away from among the present-day practitioners of the Aurvedic Medicine for want of study and practice, and this, more than anything else, has brought discredit on the Hindu System of

Medicine which is looked down upon and often made the subject of ridicule by the votaries of Modern Medicine.

"The study of a book like the one under review is bound to create a feeling of reverence and admiration in the mind of the Indian reader for the great Teachers of Medicine of ancient India who could arrive at so much truth by the simple process of study, observation and intuition without the aid of modern scientific resources at their command.

"The author has done a service to his country by writing this useful book."—**The Modern Review** (August, 1924).

"This book deals exhaustively with the principles and practice of Ancient Hindu Medicine and affords facilities for a comparative study of its system with the modern medical school of thought with a view to bring them into closer relationship with each other. This much abused and woefully reduced Hindu Medical Science had on account of the step-motherly attitude of Government on the one hand, and for want of scientific researches and experiment of the system on the other, been left all along in the back ground, but thanks to the recent renaissance, we are having quiet a crop of literature on the subject of Ancient Hindu Medicine, for which no little credit is due to the author of this book.

"We heartily recommend its use to those who are interested in the revival of the indigeneous system of medicine in India and to research scholars who may find in it good food for reflection."—**The Anticeptic** (March, 1924).

"The book has been published at an opportune moment when efforts are being made for the revival of the indigenous Hindu system of Medicine. The author has collected a mass of information in the literature on Aurveda. We recommend the book to those who are interested in the subject."—**Indian Medical Record** (April, 1924).

"The author's original intention was to make the book a comparative study of the ancient Hindu and Greek systems of medicine in the light of modern knowledge, but he later modified his purpose and has endeavoured simply to interpret and explain the Ancient Hindu Medicine, principally based upon Charaka and Susruta, in modern medical terminology. He has compiled a fascinating and informative volume of 600 pages, which cannot fail to appeal to Hindu students and others who are interested in Indian medical lore."—**The Medical Times**, London, (May, 1924).

"We had the pleasure of reviewing some works of the learned author and are glad to say now that he is one of the

great medical writers of the day. In the present book, attempt has been made to interpret and explain the Ancient Hindu Medicine, principally based upon Charaka and Susruta, in the light of modern knowledge ; and though the task of translation is an ungrateful one, specially of technical subjects of centuries back, the author has been successful in his endeavour to an appreciable extent. We are pleased to read his book and have no hesitation in recommending it to all practitioners in general and particularly to those versed in western systems of medicine but desirous of learning of what great men of their own country have already done."—**The Practical Medicine** (Dec. 1923).

"In his "Foreward" as well as in the text the author makes an excellent scholarly review of contemporary and correlated historical facts and events, which is very interesting reading. In the text he has, we see, gone very largely beyond his [illegible] plan, for more often than not he was described [illegible] taking a considerable space of the book... We congratulate the author sincerely for his great painstaking labours. The book is specially worth perusal by all students of history of medicine."—**The Calcutta Medical Journal** (Sept. 1924).

6. A Comparative Hindu Materia Medica—It contains the botanical description of about more than 800 Indian medicinal plants, their Indian and European names, their chemical analyses and their therapeutic uses. *198 pages.* **Rs. 3-12**

"A most erudite treatise and contains a vast amount of information regarding Indian drugs, some of which are of real value, though mostly unknown in this country. We recommend this book to all those interested in Indian drugs." —**The Medical Times**, London (April, 1924).

"The book describes more than 190 genera and 800 species of Indian medicinal plants in relation to their geographical distribution, morphology and therapeutic application. It is a valuable, and is a singular book on the subject. (*Translation*). **Mitteilungen zur Geschichte der Medizin und der Naturwissenscaften,** Band XXIII, Heft 2.

"It is a valuable production—a handy volume for ready reference for students of Botany. Those interested in the comparative study of the subject will find it especially useful for it gives Bengali and Hindi names of the Botanical

species. Indian botanists, herbists, and medical practitioners will find it to be a trustworthy and useful attempt on the part of the author."—**The Vedic Magazine** (Sept. 1924).

"This book contains botanical description and therapeutic uses of the indigenous Indian medical plants. The drugs have been arranged alphabetically for ready reference. The book will be useful to the Indian botanists and medical practitioners interested in the indigenous herbs."—**Indian Medical Record** (April, 1924).

"In these days when strenuous efforts are being made to revive the indigenous systems of medicine, throughout India, this book will prove an opportune and welcome publication. The charge is generally levelled against the Hindu medical system that it has no Pharmacopœia to boast of and that the therapeutic value of most of the drugs available in India is in the range of doubt and uncertainty. This publication will help, to a great extent; to remove that mist. The author has taken immense pains in compiling this work, for which there will be neither sufficient material nor facilities for research. We congratulate him on his successful enterprise."—**The Antiseptic** (P. 181, 1924).

"The book contains description of over 800 plants, alphabetically arranged under their native names, with their European names, properties. The book will be useful."—**Luzac's Oriental List and Book Review** (April, 1924).

7. Infant Feeding and Hygiene—CONTENTS :—Breast feeding, Breast-milk substitutes, The diet after weaning, Vitamines and nutrition, Hygiene. *32 pages.* **As. 8**

"It is an excellent account."—**Medical Times**, London (April, 1924).

"The object of this pamphlet is the diffusion of knowledge on the feeding of infants and on the hygienic methods of their upbringing. In a country where thousands of babies die from lack of knowledge of the simple rules of hygiene, any book of this nature is a welcome publication, and we recommend it to the English knowing Indian parents for whom it is intended."—**Indian Medical Record** (April, 1924).

"Lack of knowledge on the part of parents, coupled with growing poverty of the masses, is mainly responsible for the frightfully heavy mortality among infants in India. A diffusion of the right kind of knowledge, therefore, on the feeding of infants and on the hygienic methods of their upbringing will

meet the solution of the problem of infantile mortality in our country half way at least This booklet which treats about infantile feeding and Hygiene fills a sad want in this direction and written, as it is, in a clear, readable and non-technical style will be very much appreciated by the parental public, especially, womenfolk. We congratulate the author on his successful propaganda work which he has aimed at, in the matter of Child Welfare, through the medium of this nicely got-up booklet."—**The Antiseptic** (March, 1924).

"Infant mortality in India is the highest of all other countries of the world and there can be no denying the fact that this is mostly due to the lack of right knowledge of the parents and their inability to take proper care of their children. The present pamphlet aims to provide them with healthy information on some essential points to be always kept in mind in rearing children, such as breast-feeding, substitutes of breast milk, diet after weaning, vitamines and nutrition and the hygienic life of the child. We hope it will prove helpful to many parents in taking better care of their beloved ones."—**The Practical Medicine** (Dec. 1933).

8. National Problems—CONTENTS :—Introduction, Industry, Religious Reforms, Social Reforms, Educational Reforms, Hygiene, Growth of Nationalism. *115 pages.* **Re. 1**

"Mr. Chakraberty deals with the following important subjects in this little book : (1) Industry, (2) Religious Reforms, (3) Social Reforms, (4) Educational Reforms, (5) Hygiene, and (6) Growth of Nationalism.

He (Mr. Chakraberty) possesses, the wide experience that travelling brings and that wide culture which personal contact with advanced western nations is bound to produce and is, therefore, entitled to a respectable hearing. His patriotism is neither blind nor narrow; he is quite conscious of the drawbacks of his country and is prepared to set them right. "One ought not to think", he says, "my countrymen first whether he is a fit man in the proper place or not. But if my country is right I shall make her better, but if not right, I shall make her right. Indian nationalism should not be a self-contained goal by itself, but a transitional phase, that of bringing co-operation and love of all mankind. Indian Nationalism must not be like Western States, an agressive or self-sufficient entity, but a stepping stone to Humanity."—**Calcutta Review** (Jan. 1924).

"His introductory survey of the present political situation in India is by no means just to the British side, and the political reforms that he suggests are obviously impractical. On the other hand, he is not sparing in his criticism of the moral and social weakness by which India is afflicted. In commenting upon conditions of morals, hygiene, and education, he has a good deal to say that will be very unpalatable to his countrymen, and on several points he indicates the right lines along which reform should proceed ; but he does not show how India is to be induced to follow those lines. Education, as he says, is urgently needed by India ; but anyone who knows will smile when he reads Mr. Chakraberty's statement that "for internal order, the ordinary police force is sufficient. The enormous military expenditure ought to be utilised for education and hygiene". In short, the book points out some weaknesses of India, but it does not consider them from the standpoint of practical administrator."—**Luzac's Oriental List and Book Review** (March, 1924).

"The author—Mr. Chandra Chakraverty has discussed the problems necessary for National Progress and is of opinion that the growth and progress of nationalism does not depend merely on political activities but upon the bed-rock of Industry, Religious, Social and Educational Reforms, combined with hygienic principles, and that due to lack of these qualities, a good deal of enthusiasm and sacrifice for the country has proved fruitless. He also recommends abolition of caste barrier and is in favour of intercaste marriage. The book is ably written and carefully arranged and is sure to make an interesting reading for all well-wishers of the country, who must devote special attention to the useful suggestions made." —**The Muslim Outlook** (August 10, 1924).

"Mr. Chakraverty points out that the National Progress depends not merely on political activities but also on education, industry, hygiene etc. The author has liberal views as regards social questions. He favours inter-caste marriage on eugenic principles and gradual abolition of caste and creed barrier."—**The Indian Review** (May, 1924).

"In this book the author deals with the many social, economic, industrial and educational problems of vital importance to India. He has discussed them from the standpoint of national unity and his views are those of an advanced radical thinker. Though it may not be possible to agree with some of his views, yet they deserve careful and serious consideration by all who have the good of their country at heart.

The author has been inspired by an intense sense of patriotism to give out his views to the public and the public, we hope, will accord him a warm reception."—**Amrita Bazar Patrika** (Dec. 23, 1923).

9. **Endocrine Glands**—(In Health and in Disease) Contents :—The Suprarenals, Thyroids, Parathyroids, Hypophysis cerebri, Thymus Gland, Pineal Body, The Pancreas, the Generative Glands (The Testes, The Ovaries). *150 pages.* **Rs. 2-4**

10. **Malaria**—CONTENTS :—Etiology of Malaria, Malarial Plasmodia, Mosquitoes, Infection and Incubation, The Quartan Fevers, The Tertain Fevers, The [illegible] Pathology, The Complications and Sequelæ of Malaria, Diagnosis and Prognosis, The Treatment of Malaria, Prophylaxis. *176 pages.* **Rs. 2**

"The writer has written comprehensively on the subject. The book will prove useful to medical students and general public."—**The Indian Medical Journal** (Sept. 1924).

11. **The United States of America**—Contents :—Physiography of the U. S. A., Historical Background, Government, People, Industries, Education, Social Organization. *208 pages.* **Re. 1-8**

"We are not aware of any other Indian publication giving in a concise form, such comprehensive information about the United States. Beginning with the physiography of the country, the writer introduces us to nature's gigantic marvels, which impress the visitor. He then summarises the history of the nation and has informative chapters on its Government, people, industries, education and social organisation. These are packed with facts and figures. The book can be strongly recommended as a very useful handbook about the United States."—**United India And Indian States.** (11th October, 1924.)

"The volume is informative and hence useful."—**Current Thought** (October, 1924).

12. **Race Culture**—Contents : —Racial Elements in India, Principles of Heredity, Selection of Mate, Birth Control, Contraceptives, Sexual Hygiene. *100 pages.* **Re. 1-4**

"It is a well-executed piece of work and would amply repay perusal."—**The Modern Review** (Sept. 1924).

"It is an excellent book and will be very useful in the hands of all. Books of Eugenics are new in India though old works on the same are as old as the hills. Pruriency must be sacrificed at the alter of the welfare of the country and safety values must be supplied. The author has lighted the lamps of knowledge he was in possession of and though some of his views are too advanced, yet one cannot but be delighted to read the book from cover to cover."—**Sahakar** (Sept. 1924).

Works By Swami Satyananda

13. The Origin of Christianity—CONTENTS :—I. Historical relation between Buddhism and Christianity. II.—The life of Jesus. III.—The Canonical Parallels. *272 pages.* **Rs. 3**

"There have been many books issued purporting to describe the origin of Christianity. All have been more or less interesting and useful in their way ; but there is still a place for such a radical work as is here presented to readers of a rationalistic turn of mind.

"Our author divides his fascinating essay into three parts which he names : I, Historical Relation Between Buddhism and Christianity ; II, The Life of Jesus, and, III, The Textual Parallels.

"In the first part he discusses such questions as follows : The Age of the Buddhist Canons, Who were the Essenes ? Was John the Baptist a Buddhist ? Objections to the Theory of Christianity Borrowed from Buddhism answered, The Egyptian Influence on the Jews, The Persian Influence on the Jews. This learned discussion which covers some ninety pages of this engaging book, seems to us very convincing in its conclusions. There is not the slightest doubt of the fact that Christianity is essentially an eclectic religion. There is absolutely nothing original about it ; and that it borrowed very extensively from Buddhism, is as plain as the associated fact that it owes much to Judaism for both its theology and its moral precepts.

"The second part, dealing with the Life of Jesus, constitutes the unique feature of this very uncommon treatise. The argument covers here more than a hundred pages and is engrossingly interesting. It is, in fact, the fullest and most discriminating analysis of the mental and moral characteristics of the Prophet of Nazareth that we have ever met with in a single volume.

"He first speaks of Jesus' "Racial Heredity", in which he considers (*a*) Morals of the Jews, (*b*) Gonorrhœa and Syphilis among the Jews, (*c*) Insanity Among the Jews and (*d*) Jesus and His Life. The reader will find in this part of the work some things that may be new to him, and seemingly improbable ; but if he will read on carefully, he will find each statement made by the writer verified in the Scripture textual criticism which follows.

"The author then goes on to speak of the Physical Constitution of Jesus, his education, his ignorance, anger and hatred, hallucinations, incoherence of ideas, anxieties and fears of persecution, vaso-motor derangement of Jesus, insanities, trial and crucifixion, and Jesus according to the Manuscript found by Nicholas Notovitch. He supports every position he takes by quotations from the Bible ; and the result is, that we have here presented one of the most critical and well-reasoned portraits of Jesus published in modern times.

"The third part of this attractive dissertation concerns itself with some textual parallels between certain sayings or circumstances reported in connection with Jesus, and like things related concerning Gautama the Buddha. There are in all fifty-one parallels, which virtually cover the most important elements in the life of Jesus. Each one of these carries an interest all its own, and gives the reader a very instructive insight into the essential nature of the personality of the man whom millions of human beings look upon as the Eternal Son of God ; and let us into the secret of their true origin.

"This work consists of 272 pages of text, apart from twenty pages of introductory matter, including a valuable bibliography. The bibliography is divided into five portions as follows : (*a*) Jesus Christ treated as a human being, but an idealist, (*b*) Jesus Christ treated critically, (*c*) Jesus Christ treated as insane, (*d*) Jesus Christ treated as myth, (*e*) Relationship of Christianity to Buddhism. There are three illustrations, one being a photograph of a Byzantine mosaic of Jesus made in the eleventh century. It offers a nearer approach to the likeness of Jesus than any we have heretofore seen.

"We cannot speak too highly of this thought-provoking book. It is rich in facts and so very entertaining that one quickly becomes absorbed in its narrative, just as if it were a romance with a purpose, as it undoubtedly is when made into a reality by believers. The reader fortunate enough to obtain a copy of this edifying book, has in prospect a real intellectual

treat, and at a very moderate cost."—**The Truth Seeker**, New York, (March 1, 1924).

"The author reveals an extensive scholarship in the study he has proposed to give us in the pages of this book. The treatment is fairly exhaustive and in the chapter on Relationship of Christianity with Buddhism he is thoroughly convincing. The social picture of the Jews as drawn by the author is gloomy indeed, but facts are facts and historical references support them. The book will throw a flood of light on the early history of Christianity and the immense debt of gratitude that this religion owes to other systems of thought."—**The Vedic Magazine** (Sept. 1924).

"There are three parts in the book. In the first part the author describes the historical relation between Buddhism and Christianity. His conclusion is "that John the Baptist was a Buddhist and if Jesus took baptism from him, he also became initiated thereby and converted into Buddhistic doctrines." P. 36.

"The second book is on the "Life of Jesus." In this book the author tries to prove that the Jews were "a coarse, vulgar and licentious race," and Jesus was born and brought up as a Jew. He has quoted many passages from the Bible to prove the ignorance, anger and hatred, hallucinations, anxieties and fears, and insanities of Jesus.

"In the third part the author quotes many parallel passages from the Buddhist scriptures to prove "that Christianity owed its origin to Buddhism."

"There was a time when Christian missionaries used to hunt after the weak points of popular religion and their preaching meant nothing but the vilification of Hinduism. The Christian missionaries always acted on the offensive and the Hindus were on the defensive. But now the tables have been turned."—**The Modern Review** (Dec. 1923).

"That there is an intimate relation between Buddhism and Christianity is evident from the researches made into the ancient documents. A striking similarity in tenets, rites and rituals lends probability to the theory that Christianity has borrowed extensively from Buddhism. The book "Christianity" has traced the history of the early faiths and the probable reaction of Buddhistic influence on Christianity. The author enters upon the task in a spirit of delicious detachment that pervades the whole work and it amply justifies the author's claim that it is not the outcome of any religious passion. In detailing the growth of Christianity, it gives a vivid account of

the battle of conflicting faiths, the falls, fumblings and rebuffs which Christianity had to bear in its combat against Mithraism. Translations from the books of Apostles and utterances of Gautama are given side by side to suggest the remarkable agreement of sentimen[illegible] illuminating, elevating [illegible] (Oct. 24, 1924.)

14. The Origin of the Cross

CONTENTS : Sex-Worship in Egypt, Assyria, Phœnicia, Syria, Armenia, Persia, Greece, Italy, India, among the Jews, Druids, Cabbalists and Gnostics, Serpent, Bull, Goats, Tortoise, Dove, Tree, River, Stone and the Breast-Worship as sex-symbols. The Origin of the Cross from the sex-symbols. *206 pages.* **Rs 3.**

"There have been many books published of late years on the subject of Phallic Worship. The result of these has been that men have developed a growing sense of the fact that the worship of the generative organs, as simbolizing the creative power in Nature, was a rudimentary feature in all the ancient religions, and still lingers in some of the symbols and practices of Christianity as it is seen to-day.

"The writer of the present works deals fully with the subject of Sex-Worship, taking as a title of his book, "The Origin of the Cross." He divides his undertaking into seventeen chapters, every one of which bears an attractive designation. In nine chapters he gives this history of the primitive worship in the best known countries of the world, and also among such people as the Druids, Kabbalists and Gnostics.

"In the remaining chapters he considers fully the various objects and creatures which were looked upon as sex-symbols among the ancients, and which still allow of the same interpretation even at the present time. Among these living creatures were the serpent, the tortoise, goat, bull and dove ; and among inanimate objects, the tree, river, stones and other objects which became conspicuous in the symbolizing of the sex idea. This treatment of the subject by the author leads him up to his important conclusion that the Cross of Christianity took its rise in the Phallic conception of what was most worshipful in the economy of Nature, and how best to express it in a convenient form, as a symbol of a great truth.

"This book of 206 pages is, in some respects, the most satisfactory work on the subject that we have met with in a

long time. Coming from India, and by a writer who shows every evidence of being perfectly familiar with his subject—familiar as one who saw daily the worship mentioned performed before his very eyes—the work can be thoroughly relied on as being a true exposition in every respect.

"Among the countries and the nations he treats, we would name Egypt, Phœnicia, Persia, Greece, Italy, India, and the people called the Jews. His chapter on the "Sex-Worship among the Jews" is one of the most interesting and instructive to be found in this very useful volume. Too little is known of the history of the Jews by persons who esteemed themselves as educated. And when it comes to a question of the Jewish religion, the general ignorance is so striking, that it amounts to little more than the popular knowledge of the Shinto religion, with the secret ceremonies of which, the Crown Prince of Japan was recently married.

"Jehovah was a tribal divinity, "a jealous deity who wanted the monopoly of all the sacrifices made by the Jews. But the Jews, finding the worship of other deities, as Astarte, Baal, Moloch, more interesting and enjoyable, often preferred them to Jehovah ; and Jehovah would swear and curse, and brag of his own prowess. The history of Judaism is nothing but a continual struggle for supremacy between Jehovah, Baal, Astarte and Moloch. There was no question of monothestic principles or doctrines involved—but one Phallic god was trying to oust other Phallic gods, who were encroaching upon his own fovorite territory."

"Speaking of the Bible our author says : "There is neither idealism in that vast literature, nor poetry, execept in Solomon's song, which is entirely erotic. But let us be to the point, so as to find out the Phallic symbolism of Jehovah and the nature of Sex-Worship in which the Jews indulged." He then goes on to quote at considerable length some of the numerous texts in the Old Testament which unquestionably exhibit Jehovah as a Phallic divinity, and original Judaism as a sexual type of worship.

"Want of space forbids a more extended review of this excellent manual on the philosophy of sex as applied to the so-called religious instinct. As a work dealing with religion, it is so intensely interesting that one will desire to read it through without a single break. It is illuminating on every page. It is plain of speech without morbidity of thought. All the facts are given in a clear and attractive way ; and it seems to us that the

author has left nothing unsaid that would illustrate the truth that in Phallicism, or Sex-Worship, as it was later called, are to be found the seeds of the spirit of adoration which in recent years developed into the religion of the Synagogue, the Church and the Mosque

"This is a book of permanent value, and should be read by every Freethinker."—**The Truth Seeker**, New York (March 8, 1924).

"The students of Mythology and believers in the common origin of the various myths will find ample food for thought in the present volume. The author has taken pains to collect the material before him. He has succeeded in tracing Sex-Worship in Egypt, Assyria, Syria, Persia, Greece, Italy and India with a view to show parallels of thought in various countries. He has also attempted to trace the origin of the sex-symbols and find the origin of the Cross to be present in these symbols."—**The Vedic Magazine** (Sept. 1924).

১৫। খাদ্য ও স্বাস্থ্য। সূচী ঃ—খাদ্যের মূল উপকরণ, খাদ্যের পুষ্টিকারিতা, প্রোটিন্, ডিম, দুগ্ধ, কার্ব্বহাইড্রেট্, ফ্যাট্, শাক-সব্জি, ফল, মসলা, মাদক দ্রব্য, লবণ (minerals), জীবনী পদার্থ (vitamines) জল, আমিষ ও নিরামিষ, আহারের তারতম্য, পরিপাক, উপবাস, বালক, বৃদ্ধ, প্রৌঢ় এবং রোগীর খাদ্য। ১০১ পৃষ্ঠা। মূল্য ৸৹

১৬। জ্বর (Bengal Fevers). সূচী ঃ—ম্যালেরিয়া, কালাজ্বর, সান্নিপাত জ্বর, ঐকাহিক জ্বর, জীর্ণজ্বর (Tuberculisis). ৮০ পৃষ্ঠা (সচিত্র)। মূল্য টাকা ১৲

১৭। স্বাস্থ্য (General and Personal Hygiene). সূচী ঃ—জল, গৃহ, পোষাক পরিচ্ছদ, বিষাক্ত জন্তু, বিষাক্ত খাদ্য। ৮৮ পৃষ্ঠা। মূল্য বার আনা।

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